

# MISSOURI SPECIES AND COMMUNITIES\* OF CONSERVATION CONCERN



## *Checklist*



Bald Cypress Katydid

**JANUARY 2014**

\* Terrestrial Natural Communities. Does not include aquatic, geologic or cave communities.

## CONTENTS

ACKNOWLEDGMENTS .....	2
INTRODUCTION .....	3
TERMS AND DEFINITIONS .....	4
SPECIES CHANGES .....	8
TERRESTRIAL NATURAL COMMUNITIES .....	11
THREATENED AND ENDANGERED SPECIES IN MISSOURI .....	14
SPECIES AND STATUSES	
LICHENS.....	16
LIVERWORTS AND HORNWORTS .....	16
MOSSES.....	17
FERNS AND FERN ALLIES.....	20
FLOWERING PLANTS .....	20
FLATWORMS .....	31
MOLLUSKS .....	31
ARACHNIDS .....	33
CRUSTACEANS.....	33
MILLIPEDES .....	34
INSECTS .....	34
FISH.....	37
AMPHIBIANS.....	38
REPTILES.....	39
BIRDS (See Appendix A for tracking criteria).....	39
MAMMALS .....	40
REFERENCES .....	42
FOR MORE INFORMATION (including Webpage and Citation).....	46
<b>APPENDIX A: BIRD SPECIES TRACKED IN HERITAGE AND THEIR CRITERIA FOR EOs</b> .....	47
<b>PLANTS OF CONSERVATION CONCERN REPORTING FORM</b> .....	49
<b>ANIMALS OF CONSERVATION CONCERN REPORTING FORM</b> .....	50
<b>TERRESTRIAL NATURAL COMMUNITY REPORTING FORM</b> .....	51
<b>AQUATIC NATURAL COMMUNITY REPORTING FORM</b> .....	52

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**NOTICE:** Please submit reports of all sightings of species and natural communities listed in this checklist on the forms provided in the back of this checklist. Special criteria apply to birds and reports should follow the guidelines listed in Appendix A.

## INTRODUCTION

The Department of Conservation is charged with the protection and management of Missouri's fish, forest, and wildlife resources. In the brief time since the settlement of Missouri, many plants and animals have declined to levels of concern and some have disappeared entirely. The species cataloged in this checklist represent 18 percent of the native vascular plants, 14 percent of the nonvascular plants, 28 percent of the vertebrate animals, and an unknown percentage of the native invertebrate species in Missouri. Together, the animals, plants, and natural communities represent Missouri's biological diversity—a heritage worth protecting.

The Department maintains two references relating to the status of listed plants and animals in Missouri: the *Missouri Species and Communities of Conservation Concern Checklist* and the *Wildlife Code of Missouri*. The *Missouri Species and Communities of Conservation Concern Checklist* is mostly utilized for planning and communication purposes. All animal species in the State of Missouri are protected as biological diversity elements unless a method of legal harvest or take is described in the *Wildlife Code of Missouri*. All plant species in the State of Missouri are protected as biological diversity elements only on land owned by the Missouri Department of Conservation. Species listed in the *Wildlife Code of Missouri* under 3 CSR 10-4.111 and 3 CSR 10-4.113, and all federally listed endangered and threatened plants and animals protected by the Endangered Species Act of 1973 (ESA) are protected by the State Endangered Species Law 252.240. Some additional plants and animals in this checklist also appear in the *Wildlife Code of Missouri* and are afforded special legal protection.

### How to use the checklist

The checklist, developed with the cooperation of specialists throughout the state, is a list of plants, animals, and natural communities the Department of Conservation is particularly concerned about due to population declines or apparent vulnerability. The state rank (SRANK) shows the level of concern for each Element's continued existence in Missouri. For each Element (i.e., species, subspecies or variety, or natural community type), at least 6 basic factors are considered when assigning an SRANK:

- the estimated number of Element Occurrences (EOs) throughout the Element's state range
- the estimated state abundance of the Element (measured by population, area, or stream length)
- the estimated size of the Element's state range
- the trend in the Element's distribution over its state range
- the estimated number of adequately protected EOs throughout the Element's state range
- the degree to which the Element is threatened in the state

The checklist also indicates for each lichen, plant, and animal Element information on the Element's global rank (i.e., its relative rarity or endangerment in the world). This is useful for understanding the relative rarity or endangerment of an Element from a global perspective (i.e., beyond state, national, or regional boundaries). Global ranks (i.e., GRANKS), are completed by the Natural Heritage/Conservation Data Center personnel and/or NatureServe. For each Element, the same six factors listed above for SRANKS are considered when assigning GRANKS, but in a global context. Additionally, the fragility or susceptibility of the Element to intrusion or disturbance is considered when assigning a global rank.

The Global and State Ranking System methodology was developed and provided by The Nature Conservancy, Conservation Science Division, in association with the Network of Natural Heritage Programs and Conservation Data Centers. NatureServe 2005. NatureServe Central Databases. Arlington, Virginia. U.S.A.

The checklist is arranged by broad taxonomic groups (e.g., terrestrial natural communities, flowering plants, insects, fish, and mammals). Within each group, species are arranged alphabetically by their scientific names and terrestrial natural communities by community type. Each Element is identified by its scientific name, common name, federal status, state status, global rank, and state rank.

## TERMS AND DEFINITIONS

### **FEDERAL STATUS**

The federal status is derived from the provisions of the Endangered Species Act of 1973, as amended, which is administered by the U.S. Fish and Wildlife Service. Passage of the Endangered Species Act of 1973 gave the United States one of the most far-reaching laws ever enacted by any country to prevent the extinction of imperiled animals and plants. Protecting endangered and threatened species and restoring them to the point where their existence is no longer jeopardized is the primary objective of the Fish and Wildlife Service's Endangered Species Program.

**E: Endangered:** Any species which is in danger of extinction throughout all or a significant portion of its range.

**T: Threatened:** Any species which is likely to become endangered within the foreseeable future.

**C: Candidate:** Plants or animals which the Service is reviewing for possible addition to the list of endangered and threatened species.

**PE: Proposed Endangered:** Species officially proposed for listing as endangered; final ruling not yet made.

**PT: Proposed Threatened:** Species officially proposed for listing as threatened; final ruling not yet made.

**SAT: Threatened due to similarity of appearance:** Species is listed for its protection due to similarity of appearance with another listed species. Species listed as SAT are not biologically threatened.

### **STATE STATUS**

Rule 3CSR10-4.111 of the *Wildlife Code of Missouri* and certain state statutes apply to state *Code*-listed species.

**E: Endangered:** Determined by the Department of Conservation under constitutional authority.

### **GLOBAL RANK**

A numeric rank (G1 through G5) of relative endangerment based primarily on the number of occurrences of the Element (i.e., species, subspecies, or variety) globally. Other factors in addition to the number of occurrences are considered when assigning a rank, so the numbers of occurrences suggested for each numeric rank below are not absolute guidelines.

**G1: Critically Imperiled:** Critically imperiled globally because of extreme rarity or because of some factor(s) making it especially vulnerable to extinction. Typically 5 or fewer occurrences or very few remaining individuals (<1,000) or acres (<2000) or linear miles.

**G2: Imperiled:** Imperiled globally because of rarity or because of some factor(s) making it very vulnerable to extinction or elimination. Typically 6 to 20 occurrences or few remaining individuals (1,000 to 3,000) or acres (2,000 to 10,000) or linear miles (10 to 50).

## **GLOBAL RANK (Cont.)**

**G3: Vulnerable:** Vulnerable globally either because very rare and local throughout its range, found only in a restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extinction or elimination. Typically 21 to 100 occurrences or between 3,000 and 10,000 individuals.

**G4: Apparently Secure:** Uncommon but not rare (although it may be rare in parts of its range, particularly on the periphery), and usually widespread. Apparently not vulnerable in most of its range, but possibly cause for long-term concern. Typically more than 100 occurrences and more than 10,000 individuals.

**G5: Secure:** Common; widespread and abundant (although it may be rare in parts of its range, particularly on the periphery). Not vulnerable in most of its range. Typically with considerably more than 100 occurrences and more than 10,000 individuals.

**G#G#: Range Rank:** A numeric range rank (e.g., G2G3) is used to indicate uncertainty about the exact status of a taxon. Ranges cannot skip more than one rank (e.g., GU should be used rather than G1G4).

**GNR: Not Ranked:** Status has not been assessed.

**GU: Unrankable:** Currently unrankable due to lack of information or due to substantially conflicting information about status or trends. Note: Whenever possible, the most likely rank is assigned and the question mark qualifier is added (e.g., G2?) to express uncertainty, or a range rank (e.g., G2G3) is used to delineate the limits (range) of uncertainty.

**GH: Possibly Extinct/Extirpated:** Known from only historical occurrences, but may nevertheless still be extant; further searching needed.

**GX: Presumed Extinct:** Believed to be extinct throughout its range. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered.

## **SUBRANK:**

**T: Taxonomic Subdivision:** Rank applies to a subspecies or variety.

## **QUALIFIERS:**

**?: Inexact Numeric Rank:** Denotes inexact numeric rank. (The ? is not used in combination with range ranks.)

**Q: Questionable Taxonomy:** Distinctiveness of this entity as a taxon or community at the current level is questionable; resolution of this uncertainty may result in change from a species to a subspecies or hybrid, inclusion of this taxon in another taxon, or inclusion of this community within another community, with the resulting Element having a lower-priority (numerically higher) conservation status rank.

## **STATE RANK**

A numeric rank (S1 through S5) of relative endangerment based primarily on the number of occurrences of the Element (i.e., species, subspecies, or variety) within Missouri. Other factors considered when assigning a rank include: abundance, population trends, distribution, number of protected sites, degree of threat, suitable habitat trends, level of survey effort and life history. Thus, the number of occurrences suggested for each numeric rank below are not absolute guidelines. Missouri species of conservation concern typically do not fall within the range of S4-S5.

**S1: Critically Imperiled:** Critically imperiled in the state because of extreme rarity or because of some factor(s) making it especially vulnerable to extirpation from the state. Typically 5 or fewer occurrences or very few remaining individuals (<1,000).

**S2: Imperiled:** Imperiled in the state because of rarity or because of some factor(s) making it very vulnerable to extirpation from the state. Typically 6 to 20 occurrences or few remaining individuals (1,000 to 3,000).

**S3: Vulnerable:** Vulnerable in the state either because rare and uncommon, or found only in a restricted range (even if abundant at some locations), or because of other factors making it vulnerable to extirpation. Typically 21 to 100 occurrences or between 3,000 and 10,000 individuals.

**S4: Apparently Secure:** Uncommon but not rare, and usually widespread in the state. Possibly of long-term concern. Usually more than 100 occurrences and more than 10,000 individuals.

**S5: Secure:** Common, widespread, and abundant in the state. Essentially ineradicable under present conditions. Typically with considerably more than 100 occurrences and more than 10,000 individuals.

**S#S#: Range Rank:** A numeric range rank (e.g., S2S3) is used to indicate the range of uncertainty about the exact status of the Element. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4).

**S?: Unranked:** Species is not yet ranked in the state. Typically not included in the Checklist.

**SU: Unrankable:** Currently unrankable due to lack of information or due to substantially conflicting information about status or trends. Seeking information to assist in assigning status, and may be included in the Checklist.

**SE: Exotic:** An exotic established in the state; may be native in nearby regions (e.g., house finch or catalpa in eastern U.S.)

**SA: Accidental/Nonregular:** Accidental or casual in the state (i.e., infrequent and outside usual range).

**SP: Potential:** Potentially occurring in the state but no occurrences reported.

**SR: Reported:** Element reported in the state but without persuasive documentation which would provide a basis for either accepting or rejecting (e.g., misidentified specimen) the report.

**SRF: Reported Falsely:** Element erroneously reported in the state and the error has persisted in the literature.

**STATE RANK (Cont.)**

**SH: Historical:** Element occurred historically in the state, with expectation that it may be rediscovered. May not have been verified in the past 20 years and suspected to be still extant.

**SX: Extirpated:** Element is believed to be extirpated from the state.

**QUALIFIERS:**

**?: Inexact or Uncertain:** Denotes inexact or uncertain numeric rank. (The ? qualifies the character immediately preceding it in the SRANK. The ? is not used in combination with range ranks.)



## SPECIES CHANGES

### STATUS CHANGES

#### PLANTS

*Cyperus compressus* (Coco Grass) SU to SH because it has not been found in any native habitat for over 20 years.

*Eleocharis lanceolata* (Lance-like Spike Rush) from S1 to S2 due to recent population discoveries.

*Lipocarpa drummondii* (A Lipocarpa) from SH to S1 due to a recent redetermination of a voucher specimen.

*Monarda clinopodia* (A Horsemint) from SH to S1 due to a recent discovery in Butler County by Alan Brant.

*Scirpus pedicellatus* (A Bulrush) from S1 to SU. Six recent finds in MO have indicated that the species is more secure than previously thought, but the status of the species remains uncertain.

#### MOLLUSKS

*Somatogyrys depressus* (Sandbar Pebblesnail) from S? to S2 based on the current status of the species rangewide and its relative rareness in Missouri.

### ADDITIONS

#### PLANTS

*Bazzania trilobata* var. *depauperata* (A Liverwort) as SU due to a recent discovery in Ste. Genevieve County by John Atwood and Nels Holmberg.

*Cephalozia catenulata* (A Liverwort) as SU due to a recent redetermination of a herbarium specimen collected in the 1970's.

*Elymus churchii* (Church's wildrye) as S1 due to a recent discovery in Barry County by Justin Thomas.

*Eupatorium album* (White thoroughwort) as SU due to a recent discovery in Carter County by Justin Thomas.

*Leucolejeunea uncioloba* (A Liverwort) as SU. Only 1 documented occurrence has been recorded in MO (Oregon County).

*Muhlenbergia glabrifloris* (Inland muhly) from S3 to SU due to perceived rarity and lack of information regarding current abundance in MO.

*Panicum longifolium* (Panicgrass) as SU due to a recent discovery in Shannon County by Justin Thomas.

*Plagiochasma wrightii* (A Liverwort) as SH. Only 1 documented occurrence has been recorded in MO (Clay County).

*Pseudognaphalium helleri* (Heller's cudweed) as SU due to a recent discovery in Shannon County by Justin Thomas.

## **ADDITIONS (Cont.)**

### **PLANTS (Cont.)**

*Radula australis* (A Liverwort) as SR. Only 1 reported occurrence has been documented in MO (Texas County).

*Rhynchospora scirpoides* (Longbeak beaksedge) as SU due to a recent discovery in Shannon County by Justin Thomas.

*Styrax grandifolius* (Bigleaf snowbell) as SU due to a recent discovery in Shannon County by Justin Thomas.

### **MAMMALS**

*Myotis septentrionalis* (Northern Myotis) as S3. *Myotis septentrionalis* has suffered high mortality rates from White-nose Syndrome in the northeastern United States and with the documentation of the disease in Missouri, this species must be considered at risk of population declines. Also, the U.S. Fish and Wildlife Service is considering whether to add *Myotis septentrionalis* to the national Threatened and Endangered Species list so further information on species occurrence and status is needed.

## **DELETIONS**

### **PLANTS**

*Carex arkansana* (A Sedge) from S3 to S4 due to abundance of the species.

*Claytonia ozarkensis* (Ozark Spring Beauty) from SU to SRF due to a recent redetermination of a voucher specimen.

*Elymus diversiglumis* (Wild Rye) from SH to SRF. Voucher specimens were redetermined to be *E. churchii*.

*Riccia beyrichiana* (A Liverwort) from SU to S4 due to an increase in documented populations. It is now found in 13 counties.

*Riccia fluitans* (A Liverwort) from SU to S4 due to an increase in documented populations. It is now found in 21 counties.

*Symphytotrichum dumosum* var. *strictior* (Tradescant Aster) from S2 to S4 due to abundance of the species.

## **TAXONOMIC CHANGES**

### **PLANTS**

*Bazzania trilobata* to *Bazzania trilobata* var. *trilobata* (A Liverwort).

### **MOLLUSKS**

*Amnicola stygia* to *Amnicola stygius* (Stygian Cavesnail to Stygian Amnicola).

*Pyrgulopsis scalariformis* to *Marstonia scalariformis* (Ozark Pyrg).

**TAXONOMIC CHANGES (Cont.)**

**FISH**

*Cottus* sp. cf. *carolinae* to *Cottus specus* (Grotto Sculpin).

*Lampetra appendix* to *Lethenteron appendix* (American Brook Lamprey).

**BIRDS**

*Dendroica cerulean* to *Setophaga cerulean* (Cerulean Warbler).

*Dendroica pensylvanica* to *Setophaga pensylvanica* (Chestnut-sided Warbler).

*Dendroica virens* to *Setophaga virens* (Black-throated Green Warbler).

*Gallinula chloropus* to *Gallinula galeata* (Common Moorhen to Common Gallinule).

## TERRESTRIAL NATURAL COMMUNITIES

In addition to lichens, plants, and animals, the Missouri Natural Heritage Program tracks occurrences of high quality natural communities. Terrestrial natural communities are interrelated assemblages of plants, animals, and other living organisms incorporated into their physical surroundings- including geologic substrate, soils, topography and aspect- that are shaped by climate and other natural processes. High quality sites are ones that provide diverse assemblages of native species and represent the least distressed examples of ecosystems that existed in Missouri prior to European settlement. These natural communities frequently provide the habitat necessary for Missouri's listed lichens, plants, and animals. Examples of high-quality aquatic natural communities are included in the Natural Heritage Database, although SRANKS have not been assigned to individual aquatic natural community types. Because the Missouri Department of Conservation tracks occurrences of high quality natural communities, we encourage the submission of site information on natural communities as we do for species listed in this Checklist.

State ranks are assigned to natural communities using criteria that are similar to species SRANKs. (Criteria include total number of occurrences, number of occurrences by grade [A-D], total acres, number of counties in which the community type occurs, number of protected occurrences, and threats.) Global ranks are not applied to communities due to the difficulty in reconciling Missouri's classification system with larger scale classifications.

Natural community types have been classified using The Terrestrial Natural Communities of Missouri (Nelson, 2005). This classification system was developed to accomplish an inventory of the state's natural communities, prioritized by quality, size and distribution, to help meet land protection goals. The Terrestrial Natural Communities tracked in Heritage (high-quality examples) are listed below with their SRANKs by major community type.

### **COMMUNITY TYPE**

#### **FOREST**

#### **SRANK**

Dry-Mesic Loess/Glacial Till Forest	S3
Mesic Loess/Glacial Till Forest	S3
Dry-Mesic Limestone/Dolomite Forest	S3
Mesic Limestone/Dolomite Forest	S3
Dry-Mesic Chert Forest	S4
Dry-Mesic Sandstone Forest	S3
Mesic Sandstone Forest	S2
Dry-Mesic Sand Forest	S1
Mesic Sand Forest	S1
Dry-Mesic Igneous Forest	S4
Dry-Mesic Bottomland Forest	S3
Mesic Bottomland Forest	S2
Wet-Mesic Bottomland Forest	S2
Wet Bottomland Forest	S3
Riverfront Forest	S4
<b>Total Forest Types:</b>	<b>15</b>

<b>WOODLAND</b>	<b><u>SRANK</u></b>
Dry Loess/Glacial Till Woodland	S3
Dry-Mesic Loess/Glacial Till Woodland	S3
Dry Limestone/Dolomite Woodland	S3
Dry-Mesic Limestone/Dolomite Woodland	S3
Dry Chert Woodland	S4
Dry-Mesic Chert Woodland	S4
Dry Sandstone Woodland	S3
Dry-Mesic Sandstone Woodland	S3
Dry Sand Woodland	S1
Dry-Mesic Sand Woodland	S2
Dry Igneous Woodland	S4
Dry-Mesic Igneous Woodland	S4
Upland Flatwoods	S2
Bottomland Flatwoods	S1
Sinkhole Flatwoods	S2
Dry-Mesic Bottomland Woodland	S2
Mesic Bottomland Woodland	SH
Wet-Mesic Bottomland Woodland	S1
<b>Total Woodland Types:</b>	<b>18</b>

<b>SAVANNA</b>	<b><u>SRANK</u></b>
Dry-Mesic Loess/Glacial Till Savanna	S1
Mesic Loess/Glacial Till Savanna	SH
Limestone/Dolomite Savanna	SH
Chert Savanna	SH
Sandstone/Shale Savanna	SH
Sand Savanna	S1
<b>Total Savanna Types:</b>	<b>6</b>

<b>PRAIRIE</b>	<b><u>SRANK</u></b>
Dry Loess/Glacial Till Prairie	S2
Dry-Mesic Loess/Glacial Till Prairie	S1
Mesic Loess/Glacial Till Prairie	S1
Dry Limestone/Dolomite Prairie	S2
Dry-Mesic Limestone/Dolomite Prairie	S2
Dry-Mesic Chert Prairie	S3
Dry-Mesic Sandstone/Shale Prairie	S3
Sand Prairie	S1
Prairie Swale	S2
Hardpan Prairie	S2
Wet-Mesic Bottomland Prairie	S1
Wet Bottomland Prairie	S1
<b>Total Prairie Types:</b>	<b>12</b>

<b>GLADE</b>	<b><u>SRANK</u></b>
Limestone Glade	S2
Dolomite Glade	S3
Chert Glade	S2
Sandstone Glade	S2
Igneous Glade	S3
<b>Total Glade Types:</b>	<b>5</b>

<b>CLIFF/TALUS</b>	<b><u>SRANK</u></b>
Dry Limestone/Dolomite Cliff	S5
Moist Limestone/Dolomite Cliff	S4
Dry Sandstone Cliff	S4
Moist Sandstone Cliff	S3
Dry Chert Cliff	S3
Moist Chert Cliff	S2
Dry Igneous Cliff	S4
Moist Igneous Cliff	S4
Unconsolidated Bluff	S3
Limestone/Dolomite Talus	S4
Igneous Talus	S4
<b>Total Cliff/Talus Types:</b>	<b>11</b>

<b>STREAM EDGE</b>	<b><u>SRANK</u></b>
Sand Bar	S3
Gravel Wash	S3
Stream Bank/River Bank	S2
<b>Total Stream Edge Types:</b>	<b>3</b>

<b>WETLAND</b>	<b><u>SRANK</u></b>
Marsh	S2
Shrub Swamp	S2
Swamp	S1
Pond Marsh	S1
Pond Shrub Swamp	S2
Pond Swamp	S1
Ozark Fen	S2
Prairie Fen	S2
Forested Fen	S2
Glacial Fen	S1
Acid Seep	S2
Saline Seep	S1
Limestone/Dolomite Spring	S3
<b>Total Wetland Types:</b>	<b>13</b>

<b>CAVE</b>	<b><u>SRANK</u></b>
Cave	S4
Cave Spring	S4
Spring	S4
<b>Total Cave Types:</b>	<b>3</b>
<b>Total Terrestrial Natural Communities:</b>	<b>86</b>

## THREATENED AND ENDANGERED SPECIES IN MISSOURI

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATE<sup>1</sup> STATUS</u>	<u>FEDERAL<sup>2</sup> STATUS</u>
<b>PLANTS</b>			
<i>Asclepias meadii</i>	Mead's Milkweed	Endangered	Threatened
<i>Boltonia decurrens</i>	Decurrent False Aster	Endangered	Threatened
<i>Geocarpon minimum</i>	Geocarpon	Endangered	Threatened
<i>Helenium virginicum</i>	Virginia Sneezeweed	Endangered	Threatened
<i>Isotria medeoloides</i>	Small Whorled Pogonia <sup>3</sup>	Endangered	Threatened
<i>Lindera melissifolia</i>	Pondberry	Endangered	Endangered
<i>Physaria filiformis</i>	Missouri Bladder-pod	Endangered	Threatened
<i>Platanthera leucophaea</i>	Eastern Prairie Fringed Orchid <sup>3</sup>	Endangered	Threatened
<i>Platanthera praeclara</i>	Western Prairie Fringed Orchid	Endangered	Threatened
<i>Trifolium stoloniferum</i>	Running Buffalo Clover	Endangered	Endangered
<b>MOLLUSKS</b>			
<i>Antrobia culveri</i>	Tumbling Creek Cavesnail	Endangered	Endangered
<i>Cumberlandia monodonta</i>	Spectaclecase		Endangered
<i>Elliptio crassidens</i>	Elephantear	Endangered	
<i>Epioblasma florentina curtisii</i>	Curtis Pearlymussel	Endangered	Endangered
<i>Epioblasma triquetra</i>	Snuffbox	Endangered	Endangered
<i>Fusconaia ebena</i>	Ebonyshell	Endangered	
<i>Lampsilis abrupta</i>	Pink Mucket	Endangered	Endangered
<i>Lampsilis higginsii</i>	Higgins Eye	Endangered	Endangered
<i>Lampsilis rafinesqueana</i>	Neosho Mucket		Proposed Endangered
<i>Leptodea leptodon</i>	Scaleshell	Endangered	Endangered
<i>Plethobasus cyphus</i>	Sheepnose	Endangered	Endangered
<i>Potamilus capax</i>	Fat Pocketbook	Endangered	Endangered
<i>Quadrula fragosa</i>	Winged Mapleleaf	Endangered	Endangered
<i>Quadrula cylindrica cylindrica</i>	Rabbitsfoot		Proposed Threatened
<b>CRUSTACEANS</b>			
<i>Cambarus aculabrum</i>	Cave Crayfish		Endangered
<b>INSECTS</b>			
<i>Nicrophorus americanus</i>	American Burying Beetle <sup>3</sup>	Endangered	Endangered
<i>Somatochlora hineana</i>	Hine's Emerald	Endangered	Endangered
<b>FISH</b>			
<i>Acipenser fulvescens</i>	Lake Sturgeon	Endangered	
<i>Amblyopsis rosae</i>	Ozark Cavefish	Endangered	Threatened
<i>Cottus specus</i>	Grotto Sculpin		Proposed Endangered
<i>Crystallaria asprella</i>	Crystal Darter	Endangered	
<i>Etheostoma cragini</i>	Arkansas Darter		Candidate
<i>Etheostoma fusiforme</i>	Swamp Darter	Endangered	
<i>Etheostoma histrio</i>	Harlequin Darter	Endangered	
<i>Etheostoma nianguae</i>	Niangua Darter	Endangered	Threatened
<i>Etheostoma parvipinne</i>	Goldstripe Darter	Endangered	
<i>Etheostoma whipplei</i>	Redfin Darter	Endangered	
<i>Forbesichthys agassizi</i>	Spring Cavefish	Endangered	
<i>Hybognathus hayi</i>	Cypress Minnow	Endangered	
<i>Notropis maculatus</i>	Taillight Shiner	Endangered	
<i>Notropis sabinae</i>	Sabine Shiner	Endangered	
<i>Notropis topeka</i>	Topeka Shiner	Endangered	Endangered
<i>Noturus eleutherus</i>	Mountain Madtom	Endangered	
<i>Noturus placidus</i>	Neosho Madtom	Endangered	Threatened
<i>Percina nasuta</i>	Longnose Darter	Endangered	
<i>Platygobio gracilis</i>	Flathead Chub	Endangered	

## THREATENED AND ENDANGERED SPECIES IN MISSOURI (*Cont.*)

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATE<sup>1</sup> STATUS</u>	<u>FEDERAL<sup>2</sup> STATUS</u>
<b>FISH (<i>Cont.</i>)</b>			
<i>Scaphirhynchus albus</i>	Pallid Sturgeon	Endangered	Endangered
<i>Scaphirhynchus platyrhynchus</i>	Shovelnose Sturgeon		Threatened/SA
<i>Umbra limi</i>	Central Mudminnow	Endangered	
<b>AMPHIBIANS</b>			
<i>Cryptobranchus a. alleganiensis</i>	Eastern Hellbender	Endangered	
<i>Cryptobranchus a. bishopi</i>	Ozark Hellbender	Endangered	Endangered
<b>REPTILES</b>			
<i>Deirochelys reticularia miaria</i>	Western Chicken Turtle	Endangered	
<i>Emydoidea blandingii</i>	Blanding's Turtle	Endangered	
<i>Kinosternon flavescens</i>	Yellow Mud Turtle	Endangered	
<i>Nerodia cyclopion</i>	Mississippi Green Water Snake <sup>3</sup>	Endangered	
<i>Sistrurus catenatus catenatus</i>	Eastern Massasauga <sup>3</sup>	Endangered	Candidate
<i>Sistrurus catenatus tergeminus</i>	Western Massasauga	Endangered	
<b>BIRDS</b>			
<i>Botaurus lentiginosus</i>	American Bittern	Endangered	
<i>Circus cyaneus</i>	Northern Harrier	Endangered	
<i>Egretta thula</i>	Snowy Egret	Endangered	
<i>Falco peregrinus</i>	Peregrine Falcon	Endangered	
<i>Limnothlypis swainsonii</i>	Swainson's Warbler	Endangered	
<i>Peaeca aestivalis</i>	Bachman's Sparrow	Endangered	
<i>Rallus elegans</i>	King Rail	Endangered	
<i>Sterna antillarum athalassos</i>	Interior Least Tern	Endangered	Endangered
<i>Tympanuchus cupido</i>	Greater Prairie-chicken	Endangered	
<b>MAMMALS</b>			
<i>Canus lupus</i>	Gray Wolf		Endangered
<i>Corynorhinus townsendii ingens</i>	Ozark Big-eared Bat <sup>3</sup>	Endangered	Endangered
<i>Lepus californicus</i>	Black-tailed Jackrabbit	Endangered	
<i>Myotis grisescens</i>	Gray Bat	Endangered	Endangered
<i>Myotis sodalis</i>	Indiana Bat	Endangered	Endangered
<i>Spilogale putorius interrupta</i>	Plains Spotted Skunk	Endangered	

<sup>1</sup> Listed in the Wildlife Code of Missouri, Rule 3 CSR10-4, 111 Endangered Species.

<sup>2</sup> Federally Listed Species under the Endangered Species Act (ESA) of 1973 as Amended:

Endangered = Any species that is in danger of extinction throughout all or a significant portion of its range.

Threatened = Any species that is likely to become endangered within the foreseeable future.

Candidate = Plants or animals that the U.S. Fish & Wildlife Service is reviewing for possible addition to the list of Endangered and Threatened species.

Proposed = Any species proposed for listing as Threatened or Endangered by the U.S. Fish & Wildlife Service.

Threatened/SA = Any species listed Threatened due to Similarity of Appearance by the U.S. Fish & Wildlife Service.

<sup>3</sup> Considered extirpated, historical or accidental occurrence in Missouri.



## SPECIES AND STATUSES

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
<b>LICHENS</b>					
Cladonia cervicornis ssp. verticillata	A Lichen	S?	G5TNR		
Cladonia leporina	A Lichen	S2	G4G5		
Coenogonium missouriense	Missouri Cave Lichen	SH	GH		
Collema nigrescens	A Lichen	SU	G5?		
Dendriscoaulon intricatum	A Lichen	S?	GUQ		
Dermatocarpon moulinsii	A Lichen	S1	GNR		
Dibaeis absoluta	A Lichen	S1	G4		
Flavoparmelia rutidota	A Lichen	S?	G4G5		
Graphina sophisticascens	A Lichen	SH	GNR		
Imshaugia aleurites	A Lichen	S?	G5		
Lecidea lurida	A Lichen	SU	GNR		
Pannaria rubiginosa	A Lichen	S1	G4G5		
Parmelia squarrosa	A Lichen	S?	G5		
Parmelina horrescens	A Lichen	S1	G5		
Parmotrema hypoleucinum	A Lichen	S1	G4G5		
Parmotrema madagascariaceum	A Lichen	S?	G3G5		
Parmotrema tinctorum	A Lichen	S2	G5?		
Pseudocyphellaria aurata	A Lichen	S1	G3G5		
Psora icterica	A Lichen	S1	G5?		
Pycnothelia papillaria	A Lichen	S1	G3G5		
Ramalina intermedia	A Lichen	S1	G4G5		
Rimelia subisidiosa	A Lichen	S1	G4G5		
Tuckermannopsis ciliaris	A Lichen	S?	G3G5		
Usnea angulata	A Lichen	S1	G3G5		
Xanthoparmelia australasica	A Lichen	S1	G5		
<b>Total Lichen Records: 25</b>					
<b>LIVERWORTS AND HORNWORTS</b>					
Aneura maxima	A Liverwort	SU	G4?		
Anthoceros agrestis	A Hornwort	S?	G4G5		
Bazzania trilobata var. depauperata	A Liverwort	SU	G5TUQ		
Bazzania trilobata var. trilobata	A Liverwort	S1	G5TUQ		
Calypogeia muelleriana ssp. muelleriana	A Liverwort	SU	G5T5		
Calypogeia sullivantii	A Leafy Liverwort	SU	G4		
Cephalozia catenulata	A Liverwort	SU	G5		
Cephalozia connivens	A Liverwort	SU	G5		
Jungermannia leiantha	A Liverwort	SU	G5		
Kurzia setacea	A Liverwort	S1	G4G5		
Kurzia sylvatica	A Liverwort	S1	G5		
Leucolejeunea unciloba	A Liverwort	S1	G4G5		
Lophozia incisa	A Liverwort	SU	G5		
Marchantia aquatica	A Liverwort	SU	GNR		
Marsupella sphacelata	A Liverwort	S1	G5		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
<b>LIVERWORTS AND HORNWORTS (Cont.)</b>					
Metzgeria conjugata	A Liverwort	S1S2	G5		
Metzgeria furcata	A Liverwort	S?	G5		
Nardia lescurii	A Liverwort	S?	G3?		
Notothylas orbicularis	A Hornwort	S1	G5		
Nowellia curvifolia	A Liverwort	S?	G5		
Odontoschisma denudatum	A Liverwort	SU	G5		
Oxymitra incrassata	A Liverwort	S1	GNR		
Phaeoceros oreganus	A Hornwort	S1	GNRQ		
Plagiochasma wrightii	A Liverwort	SH	G3?		
Ptilidium pulcherrimum	A Liverwort	S1	G5		
Radula australis	A Liverwort	SR	G3G4		
Rectolejeunea maxonii	A Liverwort	S1	G4		
Riccardia multifida	A Liverwort	S1	G5		
Riccardia palmata	A Liverwort	S1	G5		
Riccia austini	A Liverwort	SU	G5		
Riccia bifurca	A Liverwort	SU	G5		
Riccia cavernosa	A Liverwort	SU	G5		
Riccia crystallina	A Liverwort	SU	G4G5		
Riccia frostii	A Liverwort	SU	G5		
Riccia hirta	A Liverwort	SU	G5		
Riccia macallisteri	A Liverwort	SU	G2G4		
Riccia nigrella	A Liverwort	SU	G4G5		
Riccia ozarkiana	A Liverwort	SH	G1G2		
Riccia sorocarpa	A Liverwort	SU	G5		
Riccia sullivantii	A Liverwort	S?	G4Q		
<b>Total Liverwort and Hornwort Records: 40</b>					
<b>MOSSES</b>					
Acaulon muticum var. muticum	A Moss	SU	G4G5TNR		
Amblystegium polygamum	A Moss	S1	G5		
Amblystegium protensum	A Moss	SU	G5T3T5		
Amblystegium radicale	A Moss	SU	G3G5		
Anacamptodon splachnoides	Knothole Moss	SU	G3G5		
Anomobryum filiforme	A Moss	S1	G4G5		
Archidium alternifolium	A Moss	S1	G4G5		
Astomum phascoides	A Pygmy Moss	SU	G3G4		
Atrichum crispulum	A Moss	SU	GNR		
Atrichum cylindricum	A Moss	SU	G5		
Brachelyma subulatum	A Moss	S1	G4G5		
Brachythecium campestre	A Moss	SU	G4G5Q		
Brachythecium salebrosum var. salebrosum	A Moss	SU	G5TNR		
Bruchia texana	A Moss	SU	G3G5		
Bryhnia novae-angliae	A Moss	SU	G5		
Bryoxiphium norvegicum	Sword Moss	S1	G5?		
Bryum algovicum var. algovicum	A Moss	S1	G4G5TNR		
Bryum cyclophyllum	A Moss	S?	G4G5		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
<b>MOSSES (Cont.)</b>					
Bryum flaccidum	A Moss	SU	G5		
Bryum klinggraeffii	A Moss	S?	G4G5		
Bryum miniatum	A Moss	S1	G4G5		
Bryum pallescens	A Moss	SU	G5		
Bryum ruderae	A Moss	SU	G3G5		
Bryum subapiculatum	A Moss	SX	G5?		
Bryum uliginosum	A Moss	S1	G3G5		
Calliergonella cuspidata	A Moss	S?	G5		
Campylopodia stenocarpa	A Moss	S1	G5		
Campylopus tallulensis	A Moss	S1	G4		
Dichelyma capillaceum	A Moss	S1	G5		
Dicranella rufescens	A Moss	S1S2	G5?		
Dicranum polysetum	A Moss	S1	G5		
Didymodon revolutus	A Moss	S1	G4		
Didymodon rigidulus var. rigidulus	A Moss	S1	G5T4?		
Ditrichum rhynchostegium	A Moss	SU	G3G5		
Drepanocladus aduncus var. kneiffii	A Moss	SU	G5T4T5		
Encalypta procera	Extinguisher Moss	S1	G4G5		
Entodon brevisetus	A Moss	SU	G4?		
Ephemerum crassinervium var. texanum	A Moss	SU	G4T3?		
Ephemerum serratum	A Moss	SU	G4		
Fissidens exilis	Small Pocket Moss	SU	G3G4		
Forsstroemia producta	A Moss	S1	G5?		
Funaria americana	A Moss	SU	G3?		
Grimmia olneyi	A Moss	S?	G3G5		
Grimmia ovalis	A Moss	SU	G5?		
Grimmia plagiopodia	A Moss	SU	G4G5		
Gymnostomum calcareum	A Moss	SU	G5?		
Herzogiella striatella	A Moss	SU	G4G5		
Homaliadelphus sharpii	Sharp's Homaliadelphus	S1	G3?		
Hypnum cupressiforme var. filiforme	A Moss	S1	G5TNR		
Hypnum lindbergii var. americanum	A Moss	SU	G5TNR		
Hypnum pallescens	A Moss	S1	G5		
Hypnum pratense	A Moss	SU	G5		
Isopterygiopsis muelleriana	A Moss	S1	G5		
Jaffuelobryum rauyi	A Moss	SU	G4?		
Jaffuelobryum wrightii	A Moss	SU	G4G5		
Leskea polycarpa	A Moss	SU	G4G5		
Leucodon brachypus	A Moss	SU	G5		
Micromitrium megalosporum	A Moss	S1S2	G4		
Micromitrium synoicum	A Moss	SU	G4		
Micromitrium tenerum	A Moss	SU	G4G5		
Mnium hornum	A Moss	SU	G5		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
<b>MOSSES (Cont.)</b>					
Mnium thomsonii	A Moss	S?	G5		
Myurella sibirica	A Moss	S?	G4?		
Neckera bessi	A Moss	S1	G4G5		
Orthotrichum anomalum	A Moss	S?	G4G5		
Orthotrichum diaphanum	A Moss	S?	G5		
Orthotrichum elegans	A Moss	S1	G5		
Orthotrichum lescurii	A Moss	SU	GNR		
Physcomitrium collenchymatum	A Moss	S1	G2G4		
Physcomitrium hookeri	A Moss	SU	G2G4		
Plagiomnium medium	A Moss	SU	G5		
Plagiothecium denticulatum	A Moss	S1	G5		
Platylomella lescurii	A Moss	S?	G5		
Pleuridium acuminatum	A Moss	SU	G3G5		
Pleuridium sullivantii	A Moss	SU	G3G5		
Pohlia annotina	A Moss	SU	G4G5		
Polytrichum formosum var. densifolium	A Moss	SU	G5TNR		
Pseudotaxiphyllum distichaceum	A Moss	SU	G4G5		
Ptychomitrium serratum	A Moss	SU	G4?		
Ptychomitrium sinense	A Moss	S1	G4G5		
Pylaisia intricata	A Moss	SU	G4		
Pylaisiadelphina tenuirostris	A Moss	SU	G5?		
Pyramidula tetragona	A Moss	SU	G3G5		
Racomitrium aciculare	A Moss	SU	G5		
Rhabdoweisia crispata	A Moss	S1	G5		
Rhytidium rugosum	Golden Glade-moss	S1	G5		
Schistidium liliputanum	A Moss	SU	GNR		
Seligeria calcarea	A Moss	S?	G4?		
Seligeria donniana	A Moss	S1	G4G5		
Seligeria pusilla	A Moss	S1	G3G5		
Sematophyllum marylandicum	A Moss	S1	G5		
Sphagnum affine	Sphagnum	S1	G5		
Sphagnum angustifolium	Narrowleaf Peatmoss	S1	G5		
Sphagnum bartlettianum	Sphagnum	SU	G4G5		
Sphagnum capillifolium	Northern Peatmoss	S1	G5		
Sphagnum cuspidatum	Sphagnum	SU	G5		
Sphagnum fallax	Sphagnum	SU	G5		
Sphagnum fimbriatum var. fimbriatum	Sphagnum	S1	G5TNR		
Sphagnum henryense	Sphagnum	S1	G4?		
Sphagnum inundatum	Sphagnum	S1	G4		
Sphagnum magellanicum	Magellan's Peatmoss	SU	G5		
Sphagnum platyphyllum	Sphagnum	SU	G5		
Sphagnum recurvum	Sphagnum	S1	G5		
Sphagnum russowii	Sphagnum	SU	G5		
Sphagnum subtile	Sphagnum	SU	G5?Q		
Sphagnum trinitense	Sphagnum	S1	G4		
Syntrichia papillosa	A Moss	S?	G5		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
<b>MOSSES (Cont.)</b>					
Syrrhopodon texanus	A Moss	S1	G5		
Thamnobryum alleghaniense	A Moss	S1	G5?		
Tortella fragilis	Fragmented Screw-moss	SU	G5		
Tortella tortuosa	Twisted Moss	SU	G5		
Trematodon longicollis	A Moss	S1	G5		
Trichostomum tenuirostre var. gemmiparum	A Moss	SU	G4TNR		
Ulotia hutchinsiae	Hutchins' Ulotia Moss	SU	G5		
Zygodon apiculatus	A Moss	S1	GU		
<b>Total Moss Records: 115</b>					

#### **FERNS AND FERN ALLIES**

Asplenium montanum	Mountain Spleenwort	SH	G5		
Azolla caroliniana	Eastern Mosquito Fern	S1S3	G5		
Botrychium biternatum	Few-lobed Grape Fern	S1	G5		
Cheilanthes alabamensis	Alabama Lip-fern	S1	G4G5		
Cheilanthes tomentosa	Woolly Lip-fern	S1	G5		
Cystopteris tenuis	A Bladderfern	S1	G5		
Dennstaedtia punctilobula	Hay-scented Fern	S2	G5		
Dryopteris carthusiana	Spinulose Shield Fern	S2	G5		
Dryopteris celsa	Log Fern	S1	G4		
Dryopteris cristata	Crested Fern	S1	G5		
Dryopteris goldiana	Goldie's Fern	S2	G4G5		
Dryopteris intermedia	Evergreen Woodfern	S1	G5		
Huperzia porophila	Fir Clubmoss	S2	G4		
Isoetes engelmannii var. engelmannii	Engelmann's Quillwort	S1?	G4TNR		
Lycopodium dendroideum	Round-branched Ground Pine	S1	G5		
Lycopodium digitatum	A Clubmoss	S2	G5		
Lycopodium tristachyum	Ground Cedar	S1	G5		
Matteuccia struthiopteris var. pennsylvanica	Ostrich Fern	S2	G5T5		
Ophioglossum crotalophoroides	Bulbous Adder's-tongue	SH	G5		
Ophioglossum petiolatum	Stalked Adder's-tongue	SX	G5		
Pellaea glabella var. missouriensis	Missouri Cliffbrake	S1S2	G5T1T2		
Pilularia americana	American Pillwort	SU	G5		
Woodsia obtusa ssp. occidentalis	Blunt-lobed Woodsia	S1	G5T3T4		
Woodwardia areolata	Netted Chain Fern	S2	G5		

#### **Total Ferns and Fern Allies Records: 24**

#### **FLOWERING PLANTS**

Acalypha deamii	Large Seeded Mercury	S1	G4?		
Aconitum uncinatum	Southern Monkshood	S1	G4		
Agalinis auriculata	Auriculate False Foxglove	S3	G3		
Agalinis heterophylla	Prairie False Foxglove	S1	G4G5		
Agalinis purpurea	Purple False Foxglove	S2	G5		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
<b>FLOWERING PLANTS (Cont.)</b>					
Agalinis viridis	Green False Foxglove	S1	G4?		
Agastache scrophulariifolia	Purple Giant-hyssop	S1	G4		
Agrimonia gryposepala	Tall Agrimony	SU	G5		
Allium burdickii	Wild Leek	S2	G4G5		
Alopecurus aequalis	Floating Foxtail Grass	S2	G5		
Amsonia ciliata var. filifolia	Ciliate Blue Star	S2S3	G5?T4?		
Anemone cylindrica	Thimbleweed	S2	G5		
Anemone quinquefolia	Wood Anemone	S1	G5		
Aralia nudicaulis	Wild Sarsaparilla	S2	G5		
Aristida adscensionis	Sixweeks Three-awn	SH	G5		
Aristida desmantha	Curly Three-awn	S1	G5		
Aristida lanosa	Woollyleaf Three-awn	S1	G5		
Aristida ramosissima	Slender Three-awn	SH	G5		
Aronia melanocarpa	Black Chokeberry	S1	G5		
Artemisia dracunculus	A Wormwood	SH	G5		
Asclepias meadii	Mead's Milkweed	S2	G2	E	T
Asclepias speciosa	Showy Milkweed	SA	G5		
Astragalus lotiflorus	Low Milk Vetch	S2	G5		
Astranthium ciliatum	Western Daisy	S2	G5T5		
Bartonia paniculata ssp. paniculata	Screwstem	S1	G5T5		
Bartonia virginica	Yellow Bartonia	S1	G5		
Berberis canadensis	American Barberry	S2	G3		
Bergia texana	Bergia	S2	G5		
Berula erecta var. incisum	Cut-leaved Water-parsnip	S1	G4G5T4T5		
Bidens laevis	A Beggar's Tick	S1	G5		
Bolboschoenus maritimus ssp. paludosus	Bayonet Grass	S1	G5T5		
Boltonia decurrens	Decurrent False Aster	S1	G2	E	T
Bouteloua gracilis	Blue Grama	S1	G5		
Bouteloua hirsuta var. hirsuta	Hairy Grama	S2	G5T5		
Bromus latiglumis	A Brome	S3	G5		
Buchloe dactyloides	Buffalo Grass	SH	G4G5		
Calamagrostis porteri ssp. insperata	Oferhollow Reed Grass	S3	G4T3		
Calamagrostis stricta ssp. inexpansa	Northern Reedgrass	S2S3	G5T5		
Calamovilfa longifolia var. longifolia	Long-leaved Reed Grass	SH	G5T5		
Callicarpa americana	French Mulberry	S1	G5		
Callirhoe bushii	Bush's Poppy Mallow	S2	G3		
Callirhoe triangulata	Clustered Poppy Mallow	SH	G3		
Calopogon oklahomensis	Grass Pink Orchid	SU	G3		
Calopogon tuberosus	Grass Pink Orchid	S2	G5		
Caltha palustris var. palustris	Marsh Marigold	S1	G5T5		
Camassia angusta	A Wild Hyacinth	S3	G5?Q		
Campanula aparinoides var. aparinoides	Marsh Bellflower	S1	G5TNR		
Campanula rotundifolia	Harebell	S1	G5		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
<b>FLOWERING PLANTS (Cont.)</b>					
Carex abscondita	A Sedge	S1	G4G5		
Carex alata	Broadwing Sedge	S2S3	G5		
Carex albicans var. australis	Bellow Beaked Sedge	S1	G5T5		
Carex albolutescens	Greenish-white Sedge	S1S2	G5		
Carex aquatilis var. substricta	A Sedge	S1	G5TNR		
Carex atherodes	Awed Sedge	S1	G5		
Carex atlantica ssp. atlantica	A Sedge	S1	G5T4		
Carex bromoides ssp. bromoides	A Sedge	S2	G5T5		
Carex buxbaumii	Brown Bog Sedge	S2	G5		
Carex communis var. communis	Fibrous-root Sedge	S2	G5T5		
Carex comosa	Bristly Sedge	S2	G5		
Carex conoidea	Field Sedge	S1	G5		
Carex cumberlandensis	A Sedge	S1	GNR		
Carex debilis var. debilis	White-edge Sedge	S1	G5T5		
Carex decomposita	Epiphytic Sedge	S3	G3G4		
Carex fissa var. fissa	A Sedge	S1	G4?T3T4		
Carex flaccosperma	A Sedge	S2	G5		
Carex gigantea	Giant Sedge	S1S2	G4		
Carex gracillima	Graceful Sedge	S1	G5		
Carex joorii	Cypress-swamp Sedge	SH	G4G5		
Carex lacustris	Lake-bank Sedge	S2	G5		
Carex laxiflora var. laxiflora	A Carex	S1	G5T5		
Carex longii	Greenish-white Sedge	S1	G5		
Carex microdonta	A Sedge	S1	G4		
Carex molestiformis	A Sedge	S2	G4		
Carex nigromarginata var. floridana	A Sedge	S1	G5T5?		
Carex oxylepis	Sharp-scale Sedge	S2	G5?		
Carex prasina	Drooping Sedge	S1	G4		
Carex reniformis	Reniform Sedge	S1	G4?		
Carex reznicekii	A Sedge	S2?	G5		
Carex sartwellii	Sartwell's Sedge	S1	G4G5		
Carex scabrata	Rough Sedge	SH	G5		
Carex socialis	A Sedge	S2	G4		
Carex sprengelii	Longbeak Sedge	S1	G5		
Carex sterilis	A Sedge	S2	G4		
Carex straminea	Straw Sedge	S1	G5		
Carex stricta	Tussock Sedge	S3	G5		
Carex sychnocephala	A Sedge	S1	G4		
Carex tenera var. echinodes	A Sedge	SH	G5TNR		
Carex tetanica	Rigid Sedge	S3	G4G5		
Carex tonsa var. rugosperma	Shaved Sedge	S1	G5T5		
Carex tonsa var. tonsa	Shaved Sedge	SH	G5T5		
Carex triangularis	Triangular Sedge	S2	G5		
Carex trichocarpa	Hairy-fruited Sedge	S1	G4		
Carex vesicaria var. monile	A Sedge	S2?	G5T4		
Carex willdenowii	Willdenow's Sedge	S1	G5		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
<b>FLOWERING PLANTS (Cont.)</b>					
<i>Carya pallida</i>	Sand Hickory	S2S3	G5		
<i>Castanea pumila</i> var. <i>ozarkensis</i>	Ozark Chinquapin	S2	G5T3		
<i>Castilleja purpurea</i> var. <i>purpurea</i>	Purple Paintbrush	SH	G5T4?		
<i>Castilleja sessiliflora</i>	Downy Painted Cup	S2	G5		
<i>Cayaponia quinqueloba</i>	A Gourd	S1	G4		
<i>Centaurea americana</i>	American basket flower	SH	G5		
<i>Centrosema virginianum</i>	Coastal Butterfly-pea	SH	G5		
<i>Ceratophyllum echinatum</i>	Coontail	S1?	G4?		
<i>Chaetopappa asteroides</i> var. <i>asteroides</i>	Common Leastdaisy	S2S3	G5T3T5		
<i>Chasmanthium laxum</i> ssp. <i>laxum</i>	Slender Spike Grass	S1	G5T5		
<i>Chasmanthium laxum</i> ssp. <i>sessiliflorum</i>	A Spike Grass	SH	G5T5		
<i>Chelone obliqua</i>	Rose Turtlehead	S2	G4		
<i>Chenopodium strictum</i> var. <i>glaucophyllum</i>	A Goosefoot	SH	G5TU		
<i>Cirsium undulatum</i>	Wavy-leaved Thistle	SH	G5		
<i>Cissus trifoliata</i>	Marine Vine	S2	G5		
<i>Clematis fremontii</i>	Fremont's Leather Flower	S3	G5		
<i>Clematis viorna</i>	A Leatherflower	S1	G5		
<i>Cleome serrulata</i>	Rocky Mountain Bee Plant	SH	G5		
<i>Coeloglossum viride</i> var. <i>virescens</i>	Long-bracted Orchid	S1	G5T5		
<i>Coelorachis cylindrica</i>	Joint Grass	S1	G4G5		
<i>Conyza canadensis</i> var. <i>pusilla</i>	Fleabane	S1S2	G5T5		
<i>Corispermum pallasii</i>	A Bugseed	SH	G4?		
<i>Corispermum villosum</i>	Oriental Tick-seed	SU	G4?		
<i>Corydalis micrantha</i> ssp. <i>australis</i>	A Corydalis	S2	G5T5?		
<i>Crataegus marshallii</i>	Parsley Haw	S1	G5		
<i>Crataegus spathulata</i>	A Hawthorn	S1	G5		
<i>Croton michauxii</i>	Narrowleaf Rushfoil	S1	G5		
<i>Cyclachaena xanthifolia</i>	A Marsh Elder	S1	G5		
<i>Cynoscadium digitatum</i>	Finger Dog-shade	S2	G4G5		
<i>Cyperus compressus</i>	Coco Grass	SH	G5		
<i>Cyperus croceus</i>	Baldwin's Cyperus	S1	G5		
<i>Cyperus diandrus</i>	Umbrella Flatsedge	S1	G5		
<i>Cyperus flavicomus</i>	An Umbrella Sedge	S1	G5		
<i>Cyperus grayoides</i>	An Umbrella Sedge	S3	G3		
<i>Cyperus hystrix</i>	Flatsedge	S1	G4		
<i>Cyperus plukenetii</i>	Plukenet's Cyperus	S1	G5		
<i>Cyperus polystachyos</i> var. <i>texensis</i>	Many-spiked Cyperus	S2S3	G5T5		
<i>Cyperus retroflexus</i>	Umbrella Sedge	S1	G5		
<i>Cyperus retrofractus</i>	Teasel-like Cyperus	S1S2	G5		
<i>Cyperus retrorsus</i>	An umbrella sedge	SH	G5		
<i>Cyperus schweinitzii</i>	Schweinitz's Flatsedge	S3	G5		
<i>Cyperus setigerus</i>	Bristled Cyperus	S1	G3G5		
<i>Cypripedium candidum</i>	Small White Lady-slipper	S1	G4		



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<b>FLOWERING PLANTS (Cont.)</b>					
Cypripedium reginae	Showy Lady-slipper	S2S3	G4		
Dalea enneandra	Nine-anther Dalea	S2	G5		
Dalea gattingeri	Gattinger Prairie-clover	S1	G3G4		
Dalea multiflora	Round-headed Prairie Clover	SH	G5		
Decodon verticillatus	Swamp Loosestrife	S1	G5		
Delphinium exaltatum	Tall Larkspur	S2	G3		
Descurainia pinnata ssp. pinnata	Tansy Mustard	S2S3	G5T5		
Desmodium ochroleucum	Creamflower Tick Trefoil	SH	G1G2		
Desmodium strictum	Pineland Tick Trefoil	S1	G4		
Desmodium viridiflorum	Velvety Tick Trefoil	S1	G5?		
Diarrhena americana	American Beakgrain	S1	G4G5		
Dichondra carolinensis	Pony-foot Grass	S1	G5		
Dirca decipiens	Leatherwood	SU	G1G2		
Distichlis spicata var. spicata	Seashore Salt Grass	S1	G5TNR		
Dodecatheon amethystinum	Amethyst Shooting Star	S2	G4		
Dodecatheon frenchii	French's Shooting Star	S1	G3		
Doellingeria umbellata var. pubens	Flat-topped White Aster	S1	G5T5		
Echinacea angustifolia	Narrow-leaved Coneflower	SH	G4		
Echinochloa walteri	A Barnyard Grass	S1	G5		
Echinodorus tenellus var. parvulus	Dwarf Burhead	S1	G3T3		
Elatine triandra	Waterwort	SH	G5		
Eleocharis atropurpurea	A Spike Rush	S1	G4G5		
Eleocharis equisetoides	Horsetail Spike Rush	SH	G4		
Eleocharis lanceolata	Lance-like Spike Rush	S2	G4G5		
Elodea canadensis	Broad Waterweed	SU	G5		
Elymus churchii	Church's Wildrye	S1	G2G3		
Epifagus virginiana	Beech Drops	S2	G5		
Epilobium leptophyllum	Willow Herb	S1	G5		
Eragrostis glomerata	A Love Grass	S1	G3G5		
Eragrostis reptans	Creeping Love Grass	SH	G5		
Erianthus giganteus	Plume Grass	S1	G5		
Erianthus strictus	Narrow Plumegrass	SH	G5		
Eriogonum longifolium var. longifolium	Umbrella Plant	S2	G4T4		
Erysimum capitatum var. capitatum	Western Wallflower	S3?	G5T5		
Euonymus americanus	Strawberry Bush	S2	G5		
Eupatorium album	White Thoroughwort	SU	G5		
Eupatorium maculatum var. bruneri	Spotted Joe-pye Weed	S1	G5T4T5Q		
Eupatorium rotundifolium var. scabridum	A Thoroughwort	S1?	G5T3T5		
Eupatorium semiserratum	A Thoroughwort	S1S2	G5		
Euphorbia geyeri var. geyeri	Geyer's Spurge	S1	G5T5		
Eurybia furcata	Forked Aster	S2	G3		
Eurybia macrophylla	Big-leaved Aster	S2	G5		

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<b>FLOWERING PLANTS (Cont.)</b>					
Festuca sororia	A Fescue	SH	G4		
Filipendula rubra	Queen of the Prairie	S2	G4G5		
Fimbristylis littoralis var. littoralis	A Fimbristylis	S1?	G3G5TNR		
Floerkea proserpinacoides	False Mermaid	SU	G5		
Fragaria vesca var. americana	Woodland Strawberry	S1	G5T5		
Fuirena simplex var. aristulata	An Umbrella Grass	S2?	G5T4		
Gaillardia aestivalis var. flavovirens	A Blanket Flower	SH	G5T3T5		
Galium boreale ssp. septentrionale	Northern Bedstraw	S2	G5TNR		
Gaura coccinea	Scarlet Gaura	S1	G5		
Gaylussacia baccata	Black Huckleberry	S1	G5		
Gentiana andrewsii var. andrewsii	Closed Gentian	S1	G5?T5?		
Geocarpon minimum	Geocarpon	S2	G2	E	T
Geum virginianum	Pale Avens	S1	G5		
Gillenia trifoliata	Indian Physic	SH	G4G5		
Glyceria acutiflora	Sharp-scaled Manna Grass	S3	G5		
Glyceria septentrionalis var. arkansana	Eastern Manna Grass	SU	G5		
Glycyrrhiza lepidota var. lepidota	Wild Licorice	S1	G5TNRQ		
Gratiola viscidula ssp. viscidula	Hedge Hyssop	S1	G4G5TNR		
Grindelia ciliata	A Goldenweed	S1	G4G5		
Hedyotis boscii	A Bluet	S1	G5		
Hedyotis uniflora	Clustered Bluets	S1	G5		
Helenium virginicum	Virginia Sneezeweed	S3	G3	E	T
Helianthemum canadense	A Rockrose	SU	G5		
Helianthus angustifolius	Swamp Sunflower	S2	G5		
Heliotropium curassavicum var. curassavicum	Seaside Heliotrope	S1	G5T5		
Heterotheca canescens	Hoary Golden Aster	SH	G5?		
Heuchera parviflora var. parviflora	Little Leaved Alum Root	S1	G4T4		
Hottonia inflata	Featherfoil	S2	G4		
Hydrocotyle ranunculoides	Floating Pennywort	S1S2	G5		
Hydrocotyle verticillata	Water Pennywort	S1	G5		
Hydrolea ovata	Ovate Fiddleleaf	S2	G5		
Hypericum adpressum	Creeping St. John's-wort	S1	G3		
Hypericum ascyron ssp. pyramidatum	Great St. John's-wort	S1	G4		
Hypericum lobocarpum	A St. John's Wort	S1	G4Q		
Hypericum majus	Greater St. John's-wort	SH	G5		
Ilex verticillata var. padifolia	Winterberry	S3	G5TNR		
Isolepis molesta	Gulf Coast Bulrush	SH	G4?		
Isotria medeoloides	Small Whorled Pogonia	SH	G2	E	T
Isotria verticillata	Large Whorled Pogonia	S1S2	G5		
Juncus alpinoarticulatus	Richardson Rush	SH	G5		
Juncus balticus var. littoralis	Baltic Rush	S1	G5T5		

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Juncus brachyphyllus	Small-headed Rush	SH	G5		
Juncus bufonius var. bufonius	Toad Rush	S1	G5T5		
Juncus canadensis var. canadensis	Canada Rush	S1	G5T5		
Juncus debilis	Weak Rush	S1	G5		
Juncus filipendulus	Ringseed Rush	SU	G5		
Juncus nodosus	Knotted Rush	SH	G5		
Juncus validus	A Rush	S1	G5		
Justicia ovata var. lanceolata	A Water Willow	S2	G5T4T5		
Lactuca hirsuta	Hairy Lettuce	SU	G5?		
Lactuca ludoviciana	Western Lettuce	SH	G4G5		
Lactuca tatarica ssp. pulchella	Blue Lettuce	S1	G5T5		
Lathyrus pusillus	A Wild Pea	SH	G5?		
Lechea racemulosa	Illinois Pinweed	SH	G5		
Leitneria floridana	Corkwood	S2	G3		
Lemna obscura	A Duckweed	SU	G5		
Lemna trisulca	Star Duckweed	S2	G5		
Lemna turionifera	A Duckweed	SH	G5		
Liatris punctata var. punctata	A Blazing Star	S3	G5T5		
Liatris scariosa var. nieuwlandii	A Blazing Star	S2	G5?T3T5		
Liatris spicata	Button Snakeroot	SX	G5		
Lilium philadelphicum var. andinum	Wood Lily	S1	G5T4T5		
Lilium superbum	Turk's Cap Lily	S1	G5		
Limnobia spongiosa ssp. spongiosa	American Frogbit	S2	G4		
Limnoscium pinnatum	Pinnate Dogshade	S1	G5?		
Limosella aquatica	Mudwort	SH	G5		
Lindera melissifolia	Pondberry	S1	G2G3	E	E
Linum floridanum	Florida Yellow Flax	SU	G5?		
Liparis loeselii	Loesel's Twayblade	S2	G5		
Lipocarpus aristulata	Lipocarpus	SH	G5?		
Lipocarpus drummondii	A Lipocarpus	S1	G4G5		
Listera australis	Southern Twayblade	S1	G4		
Lithospermum latifolium	American Gromwell	S2	G4		
Lobelia puberula	Downy Lobelia	SH	G5		
Lomatium foeniculaceum ssp. foeniculaceum	Hairy Parsley	S1S3	G5T5		
Ludwigia leptocarpa	Primrose Willow	S2	G5		
Ludwigia microcarpa	A False Loosestrife	S2	G5		
Ludwigia repens	A False Loosestrife	SU	G5		
Lycopus asper	Bugle Weed	SH	G5		
Lycopus uniflorus	Northern Bugleweed	S2?	G5		
Lygodesmia juncea	Skeleton Plant	S3	G5		
Lyonia mariana	Stagger Bush	SH	G5		
Lysimachia terrestris	Swamp Candle	S1	G5		
Lysimachia thyrsiflora	Tufted Loosestrife	S1	G5		
Malus angustifolia	Narrow-leaved Wild Crab	S2	G5?		
Malvastrum hispidum	Yellow False Mallow	S3	G3G5		

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<b>FLOWERING PLANTS (Cont.)</b>					
Marshallia caespitosa var. caespitosa	Barbara's Buttons	S3	G4T4		
Marshallia caespitosa var. signata	Barbara's Buttons	S1	G4T4		
Mecardonia acuminata	Water Hyssop	S1	G5		
Medeola virginiana	Indian Cucumber-root	SH	G5		
Melica mutica	Two-flowered Melic Grass	S1	G5		
Menyanthes trifoliata	Bogbean	S1	G5		
Mimulus glabratus var. jamesii	Roundleaf Monkey Flower	SH	G5T5		
Minuartia muscorum	Dixie Stitchwort	S1	GNR		
Mitreola petiolata	Miterwort	S1	G5		
Moehringia lateriflora	Grove Sandwort	S2S3	G5		
Monarda clinopodia	A Horsemint	S1	G5		
Monarda punctata var. arkansana	Arkansas Bee Balm	SA	G5TNR		
Monarda punctata var. occidentalis	Dotted Monarda	SA	G5T4T5		
Monarda punctata var. villicaulis	Horsemint	S3	G5T5?		
Muhlenbergia asperifolia	Scratchgrass	S1	G5		
Muhlenbergia glabrifloris	Inland Muhly	SU	G4?		
Najas flexilis	A Naiad	SH	G5		
Najas gracillima	Thread-like Naiad	S2	G5?		
Nemastylis geminiflora	Prairie Iris	S2	G4		
Neviusia alabamensis	Snow Wreath	SH	G2		
Nothocalais cuspidata	Prairie Dandelion	S2	G5		
Nyssa biflora	Swamp Black Gum	SH	G5		
Obolaria virginica	Virginia Pennywort	S2	G5		
Oenothera clelandii	Evening Primrose	S2	G3G5		
Oenothera fruticosa ssp. fruticosa	Shrubby Sundrops	S1	G5T5		
Oenothera fruticosa ssp. glauca	Shrubby Sundrops	SH	G5T5		
Oenothera nutans	Nodding Evening Primrose	S1S2	G4		
Oenothera perennis	Small Sundrops	S1	G5		
Oenothera rhombipetala	An Evening Primrose	SH	G4G5		
Oenothera triloba	Stemless Evening Primrose	S2	G4		
Opuntia macrorhiza	Low Prickly Pear	S2	G5		
Opuntia polyacantha var. polyacantha	Starvation Cactus	SX	G5T5		
Orobanche ludoviciana	A Broomrape	S1	G5		
Orobanche multiflora	A Broomrape	S1	G5		
Oryzopsis racemosa	Black-seeded Mountain Rice	S1	G5		
Oxytropis lambertii var. lambertii	Locoweed	S2	G5TNR		
Packera tomentosa	Hairy Groundsel	SH	G4G5		
Panicum dichotomum var. mattamuskeetense	A Panic Grass	SH	G4T4?		
Panicum dichotomum var. nitidum	A Panic Grass	S1	G5TNR		
Panicum dichotomum var. yadkinense	A Panic Grass	SH	G5T4Q		
Panicum hians	Gaping Panic Grass	S3	G5		
Panicum leibergii	A Panic Grass	SU	G5		

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<b>FLOWERING PLANTS (Cont.)</b>					
<i>Panicum longifolium</i>	Panicgrass	SU	G5		
<i>Panicum portoricense</i>	A Panic Grass	S1?	G5TNR		
<i>Panicum verrucosum</i>	Warty Panicgrass	S1	G4		
<i>Paronychia virginica</i>	Virginia Whitlow Wort	S1	G4		
<i>Paspalum bifidum</i>	Pitchfork Paspalum	S1	G5		
<i>Paspalum dissectum</i>	Mudbank Paspalum	SH	G4?		
<i>Paspalum setaceum</i> var. setaceum	Slender Paspalum	S1	G5T5		
<i>Pediomelum argophyllum</i>	Silvery Psoralea	S2	G5		
<i>Peltandra virginica</i> ssp. <i>virginica</i>	Arrow Arum	S2	G5T5		
<i>Penstemon cobaea</i> var. <i>cobaea</i>	A Beard-tongue	S1	G4TNR		
<i>Penstemon grandiflorus</i>	Large Beard-tongue	S1	G5?		
<i>Perideridia americana</i>	Eastern Eulophus	SU	G4		
<i>Phacelia covillei</i>	Coville's Phacelia	S1	G3		
<i>Philadelphus pubescens</i> var. verrucosus	Mock Orange	S1	G5?TU		
<i>Phlox amplifolia</i>	Large-leaved Phlox	S3?	G3G5		
<i>Phlox bifida</i> ssp. <i>stellaria</i>	Bifid Phlox	S1	G5?T3		
<i>Phlox carolina</i> ssp. <i>angusta</i>	Carolina Phlox	SH	G5?TNR		
<i>Phlox carolina</i> ssp. <i>carolina</i>	Carolina Phlox	S1	G5?T3T5Q		
<i>Phlox maculata</i> ssp. <i>pyramidalis</i>	Wild Sweet William	S2	G5T4T5		
<i>Phyla nodiflora</i> var. <i>incisa</i>	Fog Fruit	SH	G5TU		
<i>Phyllanthus polygonoides</i>	Knotweed Leaf-flower	S1	G5		
<i>Physaria filiformis</i>	Missouri Bladder-pod	S3	G3	E	T
<i>Physostegia intermedia</i>	A False Dragonhead	S1	G5		
<i>Plantago patagonica</i>	Woolly Plantain	S2	G5		
<i>Platanthera ciliaris</i>	Yellow-fringed Orchid	S1	G5		
<i>Platanthera clavellata</i>	Green Wood Orchid	S2	G5		
<i>Platanthera flava</i> var. <i>flava</i>	Pale Green Orchid	S2	G4?T4?Q		
<i>Platanthera flava</i> var. <i>herbiola</i>	Northern Rein Orchid	S2	G4?T4Q		
<i>Platanthera leucophaea</i>	Eastern Prairie Fringed Orchid	S1	G2G3	E	T
<i>Platanthera praeclara</i>	Western Prairie Fringed Orchid	S1	G3	E	T
<i>Platanthera psycodes</i>	Small Purple-fringed Orchid	SX	G5		
<i>Pluchea foetida</i> var. <i>foetida</i>	March Fleabane	SH	G5T5		
<i>Poa interior</i>	Inland Bluegrass	S1	G5		
<i>Pogonia ophioglossoides</i>	Snake-mouth Orchid	S1	G5		
<i>Polygonella americana</i>	Jointweed	S2	G5		
<i>Polygonum amphibium</i> var. stipulaceum	Water Smartweed	S1	G5T5		
<i>Polygonum arifolium</i>	Halberd-leaved Tear Thumb	S1	G5		
<i>Polygonum densiflorum</i>	Dense-flower Smartweed	S1S2	G5		
<i>Polygonum punctatum</i> var. <i>majus</i>	Dotted Smartweed	SU	G4G5		
<i>Polymnia laevigata</i>	Smooth Leaf-cup	SX	G3		
<i>Polypremum procumbens</i>	Juniper-leaf	S2	G5		
<i>Populus grandidentata</i>	Big-toothed Aspen	S1	G5		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
<b>FLOWERING PLANTS (Cont.)</b>					
Populus tremuloides	Quaking Aspen	S2	G5		
Potamogeton epihydrus	Nuttall Pondweed	SH	G5		
Potamogeton pulcher	Spotted Pondweed	S2S3	G5		
Potamogeton pusillus var. pusillus	Slender Pondweed	S1	G5T5		
Potentilla nicolletii	Bushy Cinquefoil	SH	GNR		
Prenanthes racemosa	Rattlesnake Root	SH	G5		
Pseudognaphalium helleri	Heller's Cudweed	SU	G4G5		
Ptilimnium capillaceum	Mock Bishop's Weed	SH	G5		
Pycnanthemum muticum	Blunt Mountain Mint	S2	G5		
Pycnanthemum torrei	Torrey Mountain Mint	SH	G2		
Quercus ellipsoidalis	Northern Pin Oak	S1	G5		
Quercus margarettiae	Sand Post Oak	SRF	G5		
Quercus nigra	Water Oak	S2	G5		
Quercus prinoides	Dwarf Chinquapin Oak	S3?	G5		
Quercus texana	Nuttall's Oak	S2	G4G5		
Ranunculus cymbalaria	Seaside Crowfoot	SH	G5		
Rhynchosia difformis	Double-formed Snoutbean	S1	G5?		
Rhynchospora harveyi	Harvey's Beak-rush	S1	G4		
Rhynchospora macrostachya var. macrostachya	Horned Rush	S1	G4T4Q		
Rhynchospora scirpoides	Longbeak Beaksedge	SU	G4		
Ribes americanum	Gooseberry	S1	G5		
Rorippa aquatica	Lake Cress	S2	G4?		
Rosa blanda	Smooth Rose	S1	G5		
Rosa virginiana	A Rose	SU	G5		
Rubus missouricus	Prickly Groundberry	SH	G5?Q		
Rudbeckia amplexicaulis	Clasping Leaved Coneflower	S?	G5		
Rudbeckia grandiflora var. grandiflora	Rough Coneflower	S1	G5T4?		
Ruppia maritima	Ditch Grass	S1	G5		
Sabatia brachiata	Marsh Pink	S1	G5?		
Sacciolepis striata	American Cupscale	S1	G5		
Sagittaria ambigua	Kansas Arrowhead	S1	G2?		
Sagittaria platyphylla	Ovate-leaved Arrowhead	S1	G5		
Salix discolor	Pussy Willow	S1	G5		
Salix eriocephala var. famelica	Diamond Willow	SU	G5TNR		
Salix petiolaris	Meadow Willow	S1	G5		
Sambucus pubens	Red-berried Elderberry	S1	G4G5Q		
Sanicula smallii	Black Snakeroot	SH	G5		
Sapindus drummondii	Soapberry	S2	G5T5		
Schoenoplectus americanus	Olney's Bulrush	SH	G5		
Schoenoplectus californicus	Giant Bulrush	S1	G5		
Schoenoplectus deltarum	Delta Bulrush	SH	G3G4		
Schoenoplectus etuberculatus	Canby's Bulrush	S1	G3G4		
Schoenoplectus hallii	Hall's Bulrush	S2	G2G3		
Schoenoplectus heterochaetus	Giant Bulrush	SU	G5		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
<b>FLOWERING PLANTS (Cont.)</b>					
Schoenoplectus purshianus	Weakstalk Bulrush	S1	G4G5		
Schoenoplectus saximontanus	A Bulrush	S1	G5		
Schoenoplectus subterminalis	Swaying Rush	S1	G4G5		
Schoenoplectus torreyi	Torrey's Bulrush	SH	G5?		
Scirpus divaricatus	A Bulrush	SH	G5		
Scirpus pallidus	Pale Bulrush	S2	G5		
Scleria reticularis var. pubescens	Muhlenberg's Nut-rush	S1	G5		
Scrophularia lanceolata	Early Figwort	SH	G5		
Scutellaria elliptica var. hirsuta	Hairy Skullcap	SH	G5T5		
Scutellaria galericulata	Marsh Skullcap	S1	G5		
Sida elliotii	Elliott Sida	S1	G4G5		
Sisyrinchium atlanticum	Eastern Blue-eyed Grass	S2	G5		
Smilax illinoensis	Carion Flower	S2S3	G4?		
Solidago riddellii	Riddell's Goldenrod	S3	G5		
Spermolepis divaricata	Rough-fruit Spermolepis	S1	G5		
Sphenopholis pensylvanica	Swamp Oats	SH	G4		
Spiraea alba var. alba	Meadow-sweet	S1	G5T5		
Spiraea tomentosa	Hardhack	S1	G5		
Sporobolus airoides	Alkali Sacaton	SH	G5		
Stachys aspera	Hedge Nettle	SH	G4?		
Stenosiphon linifolius	Stenosiphon	S2	G5		
Stylisma pickeringii var. pattersonii	A Stylisma	S1	G4T4		
Styrax grandifolius	Bigleaf Snowbell	SU	G5		
Sullivantia sullivantii	Sullivantia	S2	G4		
Symphoricarpos occidentalis	Wolfberry	S1	G5		
Symphyotrichum ciliatum	Rayless Alkali Aster	SH	G5		
Symphyotrichum racemosum var. subdumosum	Small White Aster	S2	G4G5T3T5Q		
Symphyotrichum subulatum var. ligulatum	Saltmarsh Aster	S2	G5		
Thalia dealbata	Water Canna	S2	G4		
Thelesperma filifolium	Thelesperma	S2	G4G5		
Tipularia discolor	Cranefly Orchid	S2	G4G5		
Torreyochloa pallida var. pallida	Pale Manna Grass	S1	G5T5?		
Tradescantia ozarkana	Ozark Spiderwort	S2	G3		
Tragia cordata	Heart-leaved Noseburn	S2	G4		
Trautvetteria caroliniensis	False Bugbane	S2	G5		
Trepocarpus aethusae	Trepocarpus	S1	G4G5		
Triadenum tubulosum	Marsh St. John's Wort	S1	G4?		
Trichostema setaceum	Blue Curls	S1	G5		
Tridens flavus var. chapmanii	A Grass	S2	G5T3		
Tridens muticus var. elongatus	Slim Tridens	SH	G5T4?		
Trifolium carolinianum	Carolina Clover	SH	G5		
Trifolium stoloniferum	Running Buffalo Clover	S1	G3	E	E
Trillium nivale	Snow Trillium	S3?	G4		
Trillium pusillum var. ozarkanum	Ozark Wake Robin	S2	G3T3		
Triodanis holzingeri	A Venus' Looking Glass	SH	G4		

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<b>FLOWERING PLANTS (Cont.)</b>					
Triodanis lamprosperma	A Venus' Looking Glass	S2	G5?		
Turritis glabra	Tower Mustard	SH	G5		
Typha domingensis	Southern Cattail	S1	G4G5		
Ulmus crassifolia	Cedar Elm	S1	G5		
Ulmus thomasii	Rock Elm	S2	G5		
Urtica chamaedryoides	Weak Nettle	S1	G4G5		
Utricularia minor	Lesser Bladderwort	S1	G5		
Utricularia subulata	Slender Bladderwort	S1	G5		
Valerianella ozarkana	Ozark Corn Salad	S2	G3		
Veronica americana	American Brooklime	SH	G5		
Viburnum dentatum	Southern Arrow-wood	S1	G5		
Viburnum lentago	Nannyberry	S1	G5		
Viburnum ozarkense	Ozark Arrow Wood	S2S3	GNR		
Viburnum recognitum	Northern Arrow-wood	S1	G4G5		
Vicia ludoviciana var. leavenworthii	Louisiana Vetch	SH	G5T5		
Vicia minutiflora	Pygmy-flowered Vetch	SH	G5		
Viola macloskeyi ssp. pallens	Smooth White Violet	S2	G5T5		
Vitis rotundifolia var. rotundifolia	Muscadine	S1	G5T5		
Waldsteinia fragarioides ssp. fragarioides	Barren Strawberry	S2	G5T5		
Wolffia borealis	Dotted Watermeal	SU	G5		
Wolffia columbiana	Columbia Water-meal	SU	G5		
Wolffiella gladiata	Wolffiella	S1	G5		
Xyris jupicai	Yellow-eyed-grass	S1	G5		
Xyris torta	Yellow-eyed Grass	S1	G5		
Yucca arkansana	Arkansas Yucca	S2	G5		
Yucca glauca	Small Soapweed Yucca	S2	G5		
Zannichellia palustris var. major	Horned Pondweed	S3?	G5TNR		
Zigadenus elegans ssp. glaucus	White Camas	S2	G5T4T5		
Zigadenus nuttallii	Death Camas	S1	G5		
Zizania palustris var. interior	Interior Wild Rice	SH	G4G5T4T5		
<b>Total Flowering Plant Records: 468</b>					
<b>FLATWORMS</b>					
Macrocotyla glandulosa	Pink Planarian	S1	G2G3		
Macrocotyla lewisi	Lewis' Cave Planarian	S1	G1		
Sphalloplana evaginata	Perryville Cave Planarian	S1	G1G2		
Sphalloplana hubrichti	Hubricht's Cave Planarian	S1	G2G4		
<b>Total Flatworm Records: 4</b>					
<b>MOLLUSKS</b>					
Alasmidonta marginata	Elktoe	S2	G4		
Alasmidonta viridis	Slippershell Mussel	S1	G4G5		
Amnicola stygius	Stygian Amnicola	S1	G1		
Anodonta suborbiculata	Flat Floater	S2	G5		
Anodontoides ferussacianus	Cylindrical Papershell	S1	G5		



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<b>MOLLUSKS (Cont.)</b>					
<i>Antrobia culveri</i>	Tumbling Creek Cavesnail	S1	G1	E	E
<i>Arcidens confragosus</i>	Rock Pocketbook	S3	G4		
<i>Campeloma crassulum</i>	Ponderous Campeloma	SU	G5		
<i>Cumberlandia monodonta</i>	Spectaclecase	S3	G3		E
<i>Cyprogenia aberti</i>	Western Fanshell	S2	G2G3Q		
<i>Discus nigrimontanus</i>	Black Mountain Disc	S3	G4		
<i>Elliptio crassidens</i>	Elephantear	S1	G5	E	
<i>Epioblasma florentina curtisii</i>	Curtis Pearlymussel	S1	G1T1	E	E
<i>Epioblasma triquetra</i>	Snuffbox	S1	G3	E	E
<i>Fontigens aldrichi</i>	Hoosier Springsnail	S4	G4		
<i>Fontigens antroecetes</i>	Missouri Cavesnail	S2	G2		
<i>Fontigens proserpina</i>	Proserpine Cavesnail	S1	G1		
<i>Fusconaia ebena</i>	Ebonysnail	S1	G4G5	E	
<i>Gastrocopta cristata</i>	Crested Snaggletooth	S1	G5		
<i>Gastrocopta pellucida</i>	Slim Snaggletooth	S1	G5		
<i>Hendersonia occulta</i>	Cherrystone Snail	S3	G4		
<i>Lampsilis abrupta</i>	Pink Mucket	S2	G2	E	E
<i>Lampsilis brittsi</i>	Northern Brokenray	S3	G4T3		
<i>Lampsilis higginsii</i>	Higgins Eye	S1	G1G2	E	E
<i>Lampsilis rafinesqueana</i>	Neosho Mucket	S2	G2		PE
<i>Leptodea leptodon</i>	Scaleshell	S1	G1G2	E	E
<i>Leptoxis arkansensis</i>	Arkansas Mudalia	S1	G1		
<i>Ligumia recta</i>	Black Sandshell	S2	G4G5		
<i>Lioplax sulculosa</i>	Furrowed Lioplax	S1	G5		
<i>Marstonia ozarkensis</i>	Ozark Pyrg	SH	G1		
<i>Marstonia scalariformis</i>	Moss Pyrg	S1	G1		
<i>Mesodon mitchellianus</i>	Sealed Goblet	S1	G4		
<i>Micromenetus sampsoni</i>	Sampson Sprite	S2	G2G3Q		
<i>Millerelix deltoidea</i>	Oklahoma Liptooth	SU	G2		
<i>Neohelix divesta</i>	Ozark Whitelip	S3	G3G4		
<i>Obovaria jacksoniana</i>	Southern Hickorynut	S1	G2		
<i>Obovaria olivaria</i>	Hickorynut	S3	G4		
<i>Patera perigrapta</i>	Engraved Bladetooth	S2	G5		
<i>Plectomerus dombeyanus</i>	Bankclimber	S3	G5		
<i>Plethobasus cyphus</i>	Sheepnose	S2	G3	E	E
<i>Pleurocera alveare</i>	Rugged Hornsnail	S1S3	G3		
<i>Potamilus capax</i>	Fat Pocketbook	S1	G2	E	E
<i>Ptychobranhus occidentalis</i>	Ouachita Kidneyshell	S3	G3G4		
<i>Quadrula cylindrica cylindrica</i>	Rabbitsfoot	S1	G3G4T3		PT
<i>Quadrula fragosa</i>	Winged Mapleleaf	S1	G1	E	E
<i>Quadrula nodulata</i>	Wartyback	S3	G4		
<i>Simpsonaias ambigua</i>	Salamander Mussel	S1	G3		
<i>Somatogyryus depressus</i>	Sandbar Pebblesnail	S2	G2		
<i>Somatogyryus rosewateri</i>	Elk Pebblesnail	S1	G1		
<i>Stagnicola elodes</i>	Marsh Pondsnailed	S2	G5		
<i>Stenotrema stenotrema</i>	Inland Slitmouth	S3	G5		
<i>Strobilops affinis</i>	Eightfold Pinecone	S2	G4		

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<b>MOLLUSKS (Cont.)</b>					
Toxolasma lividum	Purple Lilliput	S1	G3Q		
Toxolasma texasense	Texas Lilliput	S3	G4		
Triodopsis cragini	Post Oak Threetooth	SH	G4		
Ventridens demissus	Perforate Dome	SU	G5		
Vertigo oscariana	Capital Vertigo	S1	G4		
Zonitoides limatulus	Dull Gloss	S1	G4G5		
<b>Total Mollusk Records: 58</b>					
<b>ARACHNIDS</b>					
Apochthonius mysterius	Mystery Cave Pseudoscorpion	S1	G1G2		
Apochthonius typhlus	Stone County Cave Pseudoscorpion	S1	G1G2		
Hesperochernes occidentalis	Guano Pseudoscorpion	S3	G5		
Mundochthonius cavernicolus	Cavernicolous Pseudoscorpion	SU	G1G2		
Phanetta subterranea	Subterranean Cave Spider	S1	G5		
Porrhomma cavernicola	Cavernicolous Porrhomma Spider	S2	G5		
<b>Total Arachnid Records: 6</b>					
<b>CRUSTACEANS</b>					
Allocrangonyx hubrichti	Hubricht's Long-tailed Amphipod	S3	G2G3		
Bactrurus brachycaudus	Short-tailed Groundwater Amphipod	S4	G4		
Bactrurus hubrichti	Sword-tail Cave Amphipod	S1	G4		
Bactrurus pseudomucronatus	False Sword-tailed Cave Amphipod	S2	G2G3		
Brackenridgia ashleyi	Ashley's Isopod	S2	G1G3		
Caecidotea antricola	A Cave Obligate Isopod	S4	G5		
Caecidotea dimorpha	An Isopod	S1S3	G2G3		
Caecidotea fustis	Fustis Cave Isopod	S2	G2G3		
Caecidotea salemensis	Salem Cave Isopod	S2	G4		
Caecidotea serrata	Serrated Cave Isopod	S1	G1G2		
Caecidotea stiladactyla	Slender-fingered Cave Isopod	S1	G3G4		
Caecidotea stygia	Stygian Cave Isopod	S1	G5		
Cambarellus puer	Cajun Dwarf Crayfish	S3?	G5		
Cambarellus shufeldtii	Shufeldt's Dwarf Crayfish	S3?	G5		
Cambarus aculabrum	Cave Crayfish	SP	G1		E
Cambarus hubrichti	Salem Cave Crayfish	S3	G4		
Cambarus ludovicianus	Painted Devil Crayfish	SU	G5		
Cambarus maculatus	Freckled Crayfish	S3	G4		
Cambarus setosus	Bristly Cave Crayfish	S3	G3		
Diacyclops yeatmani	Yeatman's Groundwater Copepod	S1S3	G2G3		
Fallicambarus fodiens	Digger Crayfish	S2S3	G5		
Faxonella clypeata	Shield Crayfish	S2S3	G5		

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<b>CRUSTACEANS (Cont.)</b>					
Lirceus megapodus	An Isopod	SU	GNR		
Macrobrachium ohione	Ohio Shrimp	S1	G4		
Orconectes eupunctus	Coldwater Crayfish	S2	G2		
Orconectes harrisonii	Belted Crayfish	S3	G3		
Orconectes lancifer	Shrimp Crayfish	S1S2	G5		
Orconectes marchandi	Mammoth Spring Crayfish	S1S2	G2		
Orconectes meeki meeki	Meek's Crayfish	S1	G4T4		
Orconectes peruncus	Big Creek Crayfish	S2	G2		
Orconectes quadruncus	St. Francis River Crayfish	S2	G2		
Orconectes stygocaneyi	Caney Mountain Cave Crayfish	S1	G1		
Orconectes williamsi	Williams' Crayfish	S2	G3		
Procambarus viaeviridis	Vernal Crayfish	S3?	G5		
Stygobromus barri	Barr's Groundwater Amphipod	S1S3	G2G3		
Stygobromus clantoni	Clanton's Groundwater Amphipod	S1S3	G4		
Stygobromus heteropodus	Pickle Springs Amphipod	SX	G1G2		
Stygobromus onondagaensis	Onondaga Cave Amphipod	S3?	G3		
Stygobromus ozarkensis	Ozark Cave Amphipod	S3?	G4		
Stygobromus subtilis	Subtle Groundwater Amphipod	S1S3	G2		
Triops longicaudatus	Longtail Tadpole Shrimp	SU	G5		
<b>Total Crustacean Records: 41</b>					
<b>MILLIPEDES</b>					
Causeyella dendropus	Causeyella Cave Millipede	S2	G1G3		
Chaetaspis aleyorum	Aleys' Cave Millipede	S1	G1		
Tingupa pallida	Tingupa Cave Millipede	S4	G4		
Zosteractis interminata	Zosteractis Cave Millipede	SU	G2G3		
<b>Total Millipede Records: 4</b>					
<b>INSECTS</b>					
Acroneuria ozarkensis	Ozark Stone	S2	G2		
Agapetus artesus	Artesian Agapetus Caddisfly	S3	G3		
Aleochara speculicollis	A Staphylinid Beetle	SU	GNR		
Allocapnia pygmaea	Pygmy Snowfly	S3	G5		
Alloperla hamata	Barbed Sallfly	S3	G4		
Alloperla leonarda	Truncate Sallfly	S3	G4		
Amblytropidia mysteca	A Glade Grasshopper	SU	G5		
Amphiagrion saucium	Eastern Red Damsel	S2	G5		
Andrena beameri	An Andrenid Bee	S3	GNR		
Argia alberta	Paiute Dancer	S1	G4		
Arigomphus maxwelli	Bayou Clubtail	SU	G5		
Arrhopalites clarus	Clarus Cave Springtail	S3	G4		
Attaneuria ruralis	Giant Stone	S3	G4		
Baetisca obesa	A Mayfly	S3	G5		

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<b>INSECTS (Cont.)</b>					
Beameria venosa	A Concealed-tymbal Cicada	S3	GNR		
Biblopectus chickasaw	A Staphylinid Beetle	SU	GNR		
Calephelis borealis	Northern Metalmark	S1	G3G4		
Calephelis muticum	Swamp Metalmark	S3	G3		
Catocala marmorata	Marbled Underwing Moth	S3	G3G4		
Catocala pretiosa texarkana	Precious Underwing Moth	S3?	G4T4		
Ceratopsyche piatrix	A Net-spinning Caddisfly	S4	G4		
Chalybion zimmermanni	A Blue Mud Dauber	SU	GNR	TNR	
Cicindela celeripes	Swift Tiger Beetle	S1	G2G4		
Cicindela circumpecta johnsonii	Saline Spring Tiger Beetle	S1	G5T5		
Cicindela pruinina	Loamy-ground Tiger Beetle	S1	G3G4		
Conocephalus saltans	Prairie Meadow Katydid	S3	GNR		
Deinopsis virginiana	A Staphylinid Beetle	SU	GNR		
Derops divalis	A Staphylinid Beetle	S3	GNR		
Euphyes dukesi	Duke's Skipper	S1	G3		
Formica creightoni	Creighton's Slavemaking Ant	S3	GNR		
Formica fossiceps	An Ant	SU	GNR		
Formica querquetulana	An Ant	S3	GNR		
Gennadota canadensis	A Staphylinid Beetle	SU	GNR		
Glyphopsyche missouri	Missouri Glyphopsyche Caddisfly	S1	G1		
Gomphus fraternus	Midland Clubtail	SU	G5		
Gomphus ventricosus	Sillet Clubtail	SU	G3		
Gryllotalpa major	Prairie Mole Cricket	S3	G3		
Hesperia ottoe	Ottoe Skipper	S1	G3G4		
Hesperus stehri	A Staphylinid Beetle	SU	GNR		
Hydroperla fugitans	Austin Springfly	S3	G3		
Inscudderia taxodii	Bald Cypress Katydid	S1	GNR		
Isoperla burksi	Banded Stripetail	S3	G4		
Isoperla longiseta	Plains Stripetail	SX	G5		
Lasia purpurata	Purple Small-headed Fly	SU	GNR		
Leptysma marginicollis	Cattail Toothpick Grasshopper	S2S3	G5		
Leucotrichia pictipes	A Micro Caddisfly	S3	G5		
Libellula auripennis	Golden-winged Skimmer	SU	G5		
Lordithon niger	A Staphylinid Beetle	S3	GU		
Lytrosia permagnaria	Geometrid Moth	SU	G3G4		
Melanoplus fasciatus	Huckleberry Grasshopper	S3	G5		
Melanoplus impudicus	Immodest Grasshopper	S3	G4G5		
Melanoplus packardii	Packard's Grasshopper	S2	G5		
Melanoplus punctulatus griseus	Grizzly Grasshopper	SU	G4T4		
Melanoplus viridipes viridipes	Green-legged Grasshopper	S3	G4		
Melissodes intorta	A Callirhoe Bee	S1	GNR		
Mermiria picta	Mermiria Grasshopper	S3	G5		
Merope tuber	A Meropid Scorpionfly	S3	G3G5		

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<b>INSECTS (Cont.)</b>					
Metaleptea brevicornis	Short-horned Grasshopper	S4	G5		
Nehalennia gracilis	Sphagnum Sprite	S1?	G5		
Nehalennia irene	Sedge Sprite	S1	G5		
Neoconocephalus bivocatus	Two-voiced Conehead	S3	GNR		
	Katydid				
Neoconocephalus exiliscanorus	Slightly-musical Conehead	S3	GNR		
	Katydid				
Neoconocephalus lyristes	Bog Conehead Katydid	S3	GNR		
Neoconocephalus retusus	Round-tipped Conehead	S4?	GNR		
	Katydid				
Neoperla carlsoni	Spiny Stone	S3?	G4		
Neotrichia kitae	Kite's Neotrichian	SU	GU		
	Caddisfly				
Neotridactylus apicalis	Larger Pygmy Grasshopper	SU	GNR		
Nicrophorus americanus	American Burying Beetle	SH	G2G3	E	E
Ochrotrichia contorta	Contorted Ochrotrichian	SU	G1G2		
	Micro Caddisfly				
Oecleus chrisjohni	A Cixiid Planthopper	SU	GNR		
Oncopodura hoffi	Hoff's Cave Springtail	S1S3	G1G2		
Oxybleptes kiteleyi	A Staphylinid Beetle	SU	GNR		
Pardalophora saussurei	A Glade Grasshopper	SU	G5		
Paroxya hoosieri	Hoosier Grasshopper	S1	G5		
Pentacora signoreti	A Shore Bug	S1	GNR		
Phoetaliotes nebrascensis	Large-headed Grasshopper	S3	G5		
Phrixocnemis truculentus	Truculent Camel Cricket	SU	GNR		
Phyllobrotica lengi	A Leaf Beetle	SU	GNR		
Phyllobrotica nigrirarsis	A Leaf Beetle	SU	GNR		
Phyllobrotica physostegiae	A Leaf Beetle	S4?	GNR		
Ponera exotica	An Ant	S3	GNR		
Prostoia similis	Longhorn Forestfly	S3	G5		
Pseudomasaris occidentalis	A Pollen Wasp	S3	GNR		
Pseudosinella espana	Espana Cave Springtail	S3	G2G3		
Psinidia fenestralis	Sand Grasshopper	S2S3	G5		
Satyrodes appalachia leeuwi	Appalachian Eyed Brown	S1	G4T4		
Sepedophilus campbelli	A Staphylinid Beetle	SU	GNR		
Serratella frisoni	Frison's Seratellan Mayfly	S2	G4		
Sinella avita	Avita Cave Springtail	SU	G3G4		
Sinella barri	Barr's Cave Springtail	SU	G5		
Somatochlora hineana	Hine's Emerald	S2	G2G3	E	E
Somatochlora ozarkensis	Ozark Emerald	SU	G3		
Somatochlora provocans	Treetop Emerald	S1	G4		
Speyeria diana	Diana Fritillary	SA	G3G4		
Speyeria idalia	Regal Fritillary	S3	G3		
Stenonema bednariki	A Heptageniid Mayfly	S3	G2G4		
Stethophyma celatum	Sedge Grasshopper	S3	G4		
Stylurus intricatus	Brimstone Clubtail	S1S2	G4		
Stylurus notatus	Elusive Clubtail	S2S3	G3		
Telebasis byersi	Duckweed Firetail	S1	G5		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
<b>INSECTS (Cont.)</b>					
Telebasis salva	Desert Firetail	SU	G5		
Tettigidea armata	Spined Grouse Locust	S2S3	G5		
Tomocerus missus	Missus Cave Springtail	SU	G4		
Trimerotropis maritima	Seaside Grasshopper	SH	G5		
Xenochalepus potomaca	A Leaf Beetle	SU	GNR		
Xenotrechus condei	Northern Xenotrechus Cave Beetle	S1	G1G2		
Xenotrechus denticollis	Southern Xenotrechus Cave Beetle	S1	G1G2		
Xylodromus capito	A Staphylinid Beetle	SU	GNR		
<b>Total Insect Records: 108</b>					
<b>FISH</b>					
Acipenser fulvescens	Lake Sturgeon	S1	G3G4	E	
Alosa alabamiae	Alabama Shad	S2	G2G3		
Alosa chrysochloris	Skipjack Herring	SU	G5		
Amblyopsis rosae	Ozark Cavefish	S2	G3	E	T
Ameiurus nebulosus	Brown Bullhead	S3?	G5		
Ammocrypta clara	Western Sand Darter	S2S3	G3		
Ammocrypta vivax	Scaly Sand Darter	S3	G5		
Anguilla rostrata	American Eel	SU	G4		
Atractosteus spatula	Alligator Gar	S1	G3G4		
Carpionodes velifer	Highfin Carpsucker	S2	G4G5		
Centrarchus macropterus	Flier	S3	G5		
Cottus specus	Grotto Sculpin	S1	G2Q		PE
Crystallaria asprella	Crystal Darter	S1	G3	E	
Cyprinella camura	Bluntnose Shiner	S2S3	G5		
Erimyzon sucetta	Lake Chubsucker	S2	G5		
Etheostoma cragini	Arkansas Darter	S3S4	G3G4		C
Etheostoma euzonum erizonum	Current Saddled Darter	S3	G3G4T3T4		
Etheostoma euzonum euzonum	Arkansas Saddled Darter	S2	G3G4T3T4		
Etheostoma fusiforme	Swamp Darter	S1	G5	E	
Etheostoma histrio	Harlequin Darter	S2	G5	E	
Etheostoma microperca	Least Darter	S2	G5		
Etheostoma nianguae	Niangua Darter	S2	G2	E	T
Etheostoma parvipinne	Goldstripe Darter	S1	G4G5	E	
Etheostoma whipplei	Redfin Darter	S1	G4	E	
Forbesichthys agassizi	Spring Cavefish	S1	G4	E	
Fundulus chrysotus	Golden Topminnow	S1	G5		
Fundulus dispar	Starhead Topminnow	S2	G4		
Fundulus kansae	Northern Plains Killifish	S2	G5		
Fundulus sciadicus	Plains Topminnow	S3	G4		
Hybognathus argyritus	Western Silvery Minnow	S2	G4		
Hybognathus hankinsoni	Brassy Minnow	S3	G5		
Hybognathus hayi	Cypress Minnow	S1	G4G5	E	
Hybognathus nuchalis	Mississippi Silvery Minnow	S3S4	G5		
Hybognathus placitus	Plains Minnow	S2	G4		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
<b>FISH (Cont.)</b>					
Hybopsis amnis	Pallid Shiner	SX	G4		
Ichthyomyzon gagei	Southern Brook Lamprey	S2S3	G5		
Lepomis marginatus	Dollar Sunfish	S2	G5		
Lepomis symmetricus	Bantam Sunfish	S2	G5		
Lethenteron appendix	American Brook Lamprey	S2	G4		
Macrhybopsis gelida	Sturgeon Chub	S3	G3		
Mugil cephalus	Striped Mullet	SA	G5		
Notropis buchanani	Ghost Shiner	S2	G5		
Notropis chalybaeus	Ironcolor Shiner	S1	G4		
Notropis heterolepis	Blacknose Shiner	S2	G4		
Notropis maculatus	Taillight Shiner	S1	G5	E	
Notropis ozarcanus	Ozark Shiner	S2	G3		
Notropis sabinae	Sabine Shiner	S1	G4	E	
Notropis texanus	Weed Shiner	S3	G5		
Notropis topeka	Topeka Shiner	S1	G3	E	E
Noturus eleutherus	Mountain Madtom	S1S2	G4	E	
Noturus flavater	Checkered Madtom	S3S4	G3G4		
Noturus placidus	Neosho Madtom	S1	G2	E	T
Opsopoeodus emiliae	Pugnose Minnow	S4	G5		
Percina copelandi	Channel Darter	S3	G4		
Percina cymatotaenia	Bluestripe Darter	S2	G2		
Percina nasuta	Longnose Darter	S1	G3	E	
Percina shumardi	River Darter	S3	G5		
Percina uranidea	Stargazing Darter	S2	G3		
Percopsis omiscomaycus	Trout-perch	S1?	G5		
Pimephales tenellus parviceps	Eastern Slim Minnow	S2S3	G4T2T3		
Pimephales tenellus tenellus	Western Slim Minnow	S3	G4T4		
Platygobio gracilis	Flathead Chub	S1	G5	E	
Scaphirhynchus albus	Pallid Sturgeon	S1	G2	E	E
Typhlichthys subterraneus	Southern Cavefish	S2S3	G4		
Umbra limi	Central Mudminnow	S1	G5	E	
<b>Total Fish Records: 65</b>					
<b>AMPHIBIANS</b>					
Ambystoma annulatum	Ringed Salamander	S3	G4		
Ambystoma talpoideum	Mole Salamander	S2	G5		
Ambystoma tigrinum	Eastern Tiger Salamander	SU	G5		
Amphiuma tridactylum	Three-toed Amphiuma	S2	G5		
Anaxyrus cognatus	Great Plains Toad	SU	G5		
Cryptobranchus alleganiensis alleganiensis	Eastern Hellbender	S1	G3G4T3T4	E	
Cryptobranchus alleganiensis bishopi	Ozark Hellbender	S1	G3G4T2Q	E	E
Eurycea spelaea	Grotto Salamander	S2S3	G4		
Hemidactylium scutatum	Four-toed Salamander	S4	G5		
Lithobates areolatus circulosus	Northern Crawfish Frog	S3	G4T4		
Lithobates pipiens	Northern Leopard Frog	S2	G5		
Lithobates sylvaticus	Wood Frog	S3	G5		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
<b>AMPHIBIANS (Cont.)</b>					
Necturus maculosus louisianensis	Red River Mudpuppy	SU	G5T4		
Necturus maculosus maculosus	Common Mudpuppy	SU	G5T5		
Pseudacris illinoensis	Illinois Chorus Frog	S2	G3		
Scaphiopus holbrookii	Eastern Spadefoot	S2	G5		
<b>Total Amphibian Records: 16</b>					
<b>REPTILES</b>					
Cemophora coccinea copei	Northern Scarletsnake	S2S3	G5T5		
Clonophis kirtlandii	Kirtland's Snake	S1	G2		
Crotaphytus collaris	Eastern Collared Lizard	S4	G5		
Deirochelys reticularia miaria	Western Chicken Turtle	S1	G5T5	E	
Emydoidea blandingii	Blanding's Turtle	S1	G4	E	
Farancia abacura reinwardtii	Western Mudsnsake	S2	G5T5		
Heterodon gloydi	Dusty Hog-nosed Snake	S1	G5T3T4Q		
Heterodon nasicus	Plains Hog-nosed Snake	SX	G5		
Kinosternon flavescens	Yellow Mud Turtle	S1	G5	E	
Macrochelys temminckii	Alligator Snapping Turtle	S2	G3G4		
Nerodia cyclopion	Mississippi Green Watersnake	SX	G5	E	
Opheodrys vernalis	Smooth Greensnake	SX	G5		
Pantherophis vulpinus	Western Foxsnake	S1	G5		
Phrynosoma cornutum	Texas Horned Lizard	S2	G4G5		
Plestiodon obsoletus	Great Plains Skink	S2	G5		
Plestiodon septentrionalis obtusirostris	Southern Prairie Skink	S3	G5T5		
Plestiodon septentrionalis septentrionalis	Northern Prairie Skink	S3	G5T5		
Sistrurus catenatus catenatus	Eastern Massasauga	SX	G3G4T3Q	E	C
Sistrurus catenatus tergeminus	Western Massasauga	S1	G3G4T3T4Q	E	
<b>Total Reptile Records: 19</b>					
<b>BIRDS (See Appendix A for Tracking Criteria)</b>					
Accipiter striatus	Sharp-shinned Hawk	S2	G5		
Anhinga anhinga	Anhinga	SU	G5		
Ardea alba	Great Egret	S3	G5		
Asio flammeus	Short-eared Owl	S2	G5		
Asio otus	Long-eared Owl	SU	G5		
Athene cunicularia	Burrowing Owl	SX	G4		
Bonasa umbellus	Ruffed Grouse	SU	G5		
Botaurus lentiginosus	American Bittern	S1	G4	E	
Buteo swainsoni	Swainson's Hawk	S2	G5		
Campephilus principalis	Ivory-billed Woodpecker	SX	G1		E
Certhia americana	Brown Creeper	SU	G5		
Chlidonias niger	Black Tern	SX	G4		
Circus cyaneus	Northern Harrier	S2	G5	E	
Cistothorus palustris	Marsh Wren	S3	G5		
Coragyps atratus	Black Vulture	S3	G5		
Corvus corax	Common Raven	SX	G5		



<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
<b>BIRDS (Cont.)</b>					
Coturnicops noveboracensis	Yellow Rail	SU	G4		
Cygnus buccinator	Trumpeter Swan	S1	G4		
Egretta caerulea	Little Blue Heron	S3	G5		
Egretta thula	Snowy Egret	S1	G5	E	
Elanoides forficatus	Swallow-tailed Kite	SX	G5		
Empidonax minimus	Least Flycatcher	SU	G5		
Falco peregrinus	Peregrine Falcon	S1	G4	E	
Gallinula galeata	Common Gallinule	S2	G5		
Geococcyx californianus	Greater Roadrunner	S3	G5		
Grus canadensis	Sandhill Crane	S1	G5		
Haliaeetus leucocephalus	Bald Eagle	S3	G5		
Ictinia mississippiensis	Mississippi Kite	S3	G5		
Ixobrychus exilis	Least Bittern	S3	G5		
Lanius ludovicianus	Loggerhead Shrike	S2	G4		
Laterallus jamaicensis	Black Rail	SU	G4		
Limnothlypis swainsonii	Swainson's Warbler	S2	G4	E	
Nycticorax nycticorax	Black-crowned Night-heron	S3	G5		
Pandion haliaetus	Osprey	S2	G5		
Passerina ciris	Painted Bunting	S3	G5		
Peucaea aestivalis	Bachman's Sparrow	S1	G3	E	
Picoides borealis	Red-cockaded Woodpecker	SX	G3		E
Porzana carolina	Sora	S2	G5		
Rallus elegans	King Rail	S1	G4	E	
Rallus limicola	Virginia Rail	S2	G5		
Setophaga cerulea	Cerulean Warbler	S2S3	G4		
Setophaga pensylvanica	Chestnut-sided Warbler	SU	G5		
Setophaga virens	Black-throated Green Warbler	SU	G5		
Sitta pusilla	Brown-headed Nuthatch	SX	G5		
Spinus pinus	Pine Siskin	SU	G5		
Sterna antillarum athalassos	Interior Least Tern	S1	G4T2Q	E	E
Tympanuchus cupido	Greater Prairie-chicken	S1	G4	E	
Tyto alba	Barn Owl	S3	G5		
Vermivora bachmanii	Bachman's Warbler	SX	GH		E
Xanthocephalus xanthocephalus	Yellow-headed Blackbird	S3	G5		
<b>Total Bird Records: 50</b>					
<b>MAMMALS</b>					
Bos bison	American Bison	SX	G4		
Canis lupus	Gray Wolf	SX	G4G5		E
Canis rufus	Red Wolf	SX	G1Q		E
Cervus elaphus	Elk or Wapiti	S?	G5		
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	SU	G3G4		
Corynorhinus townsendii ingens	Ozark Big-eared Bat	SX	G3G4T1	E	E
Ictidomys tridecemlineatus	Thirteen-lined Ground Squirrel	SU	G5		
Lasionycteris noctivagans	Silver-haired Bat	S3	G5		

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>SRANK</u>	<u>GRANK</u>	<u>STATE STATUS</u>	<u>FEDERAL STATUS</u>
<b>MAMMALS (Cont.)</b>					
Lasiurus seminolus	Seminole Bat	SA	G5		
Lepus californicus	Black-tailed Jackrabbit	S1	G5	E	
Lepus townsendii	White-tailed Jackrabbit	SX	G5		
Mustela frenata	Long-tailed Weasel	S3	G5		
Mustela nivalis	Least Weasel	S3	G5		
Myotis austroriparius	Southeastern Bat	S1	G3G4		
Myotis grisescens	Gray Bat	S3	G3	E	E
Myotis leibii	Eastern Small-footed Myotis	SU	G1G3		
Myotis septentrionalis	Northern Myotis	S3	G1G3		
Myotis sodalis	Indiana Bat	S1	G2	E	E
Ochrotomys nuttalli	Golden Mouse	S3	G5		
Oryzomys palustris	Rice Rat	SU	G5		
Perognathus flavescens	Plains Pocket Mouse	S2	G5		
Peromyscus gossypinus	Cotton Mouse	S2	G5		
Poliocitellus franklinii	Franklin's Ground Squirrel	S2S3	G5		
Puma concolor	Mountain Lion	SX	G5		
Reithrodontomys montanus	Plains Harvest Mouse	S2	G5		
Spilogale putorius interrupta	Plains Spotted Skunk	S1	G5T4	E	
Sylvilagus aquaticus	Swamp Rabbit	S2	G5		
Tadarida brasiliensis	Brazilian Free-tailed Bat	SA	G5		
Taxidea taxus	American Badger	SU	G5		
<b>Total Mammal Records: 29</b>					

**Total Records Processed: 1072**

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## FOR MORE INFORMATION

The Missouri Department of Conservation collects and manages information on the location and status of species and natural communities of conservation concern throughout the state. The Natural Heritage Database is a repository for this information.

If you have information on the location or questions about the status of any element on this checklist, please write or call:

Heritage Coordinator  
Missouri Department of Conservation  
P.O. Box 180  
2901 W Truman Blvd  
Jefferson City, MO 65109  
(573) 522-4115

If you are requesting information about the location of any element on this checklist for the purposes of environmental review, please write:

Policy Coordination  
Missouri Department of Conservation  
P.O. Box 180  
Jefferson City, MO 65109

## WEBPAGE

This checklist is updated annually. The most current version is always available by contacting the Missouri Department of Conservation, Resource Science Division. *Checklist* information is also available on the Missouri Department of Conservation's website: <http://mdc.mo.gov/145>.

## CITATION

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Missouri Natural Heritage Program. 2014. Missouri species and communities of conservation concern checklist. Missouri Department of Conservation. Jefferson City, Missouri. pp. 52.

**APPENDIX A**  
**BIRD SPECIES TRACKED IN HERITAGE AND THEIR CRITERIA FOR EORS**  
**Updated August 10, 2012**

<b><u>Species (ranks)</u></b>	<b><u>Regions</u></b>	<b><u>Criteria (safe dates), comments</u></b>
<b>Anseriformes (Ducks, geese, swans)</b>		
Trumpeter Swan (S1, G4)	All (NE, NW)	1
<b>Galliformes (chicken-like birds)</b>		
Ruffed Grouse (SU, G5)	CE, OZ, SL, SE	1
Greater Prairie-chicken (S1, G4)	SW, KC, NW, NE	Anytime observed
<b>Pelecaniformes (pelicans, cormorants, darters)</b>		
Anhinga (SX, G5)	SE	1
<b>Ciconiiformes (herons, egrets, storks, ibises, vultures)</b>		
American Bittern (S1, G4)	All	1- extensive emergent marshes
Least Bittern (S3, G5)	All	1,2 (5/25-8/1)
Great Egret (S3, G5)	All (SE)	1
Snowy Egret (S1, G5)	SE	1
Little Blue Heron (S3, G5)	SE, SL	1
Black-crowned Night-Heron (S3, G5)	All (SE)	1
Black Vulture (S3, G5)	OZ, SE	1
<b>Falconiformes (hawks, falcons, eagles, kites)</b>		
Osprey (S2, G5)	All (confirmed NE, SW)	1- Any large open body of water
Mississippi Kite (S3, G5)	All (SE, SL, NE)	1- Expanding range
Bald Eagle (S3, G4)	All	1- Any large open body of water
Northern Harrier (S2, G5)	All (except OZ, SE)	1
Sharp-shinned Hawk (S2, G5)	All	1
Swallow-tailed Kite (SX, G5)	SE	1- Formerly SE, large rivers
Swainson's Hawk (S2, G5)	SW, KC	1
Peregrine Falcon (S1, G4)	SL, KC	1- Formerly along MO river bluffs
<b>Gruiformes (rails, cranes)</b>		
Sandhill Crane (S1, G5)	NE, NW, CE, SL	1
Black Rail (S1, G4)	All	Anytime observed, large marshes
Yellow Rail (SU, G4)	All	Anytime observed (migrant)
King Rail (S1, G4G5)	All (SE, SL, NE)	1,2 (5/30-7/31)
Virginia Rail (S2, G5)	All	1,2 (5/15-8/1)
Sora (S2, G5)	All	1,2 (5/30-7/31)
Common Gallinule (S2, G5)	All (except OZ)	1,2 (5/30-8/31)
<b>Charadriiformes (gulls, terns, shorebirds)</b>		
Interior Least Tern (S1, G4T2Q)	SE	1- Formerly along MS, MO Rivers
Black Tern (SX, G4)	NW	1
<b>Cuculiformes (cuckoos, roadrunners)</b>		
Greater Roadrunner (S3, G5)	SW, OZ	1
<b>Strigiformes (Owls)</b>		
Barn Owl (S3, G5)	All (SE)	1,2 (5/25-8/15)
Long-eared Owl (SU, G5)	All	1-Forests, dense thickets near water
Short-eared Owl (S2, G5)	SW, NW, NE, KC	1,2 (5/1-8/31)
Burrowing Owl (SX, G4)	NW	1



<b><u>Species (ranks)</u></b>	<b><u>Regions</u></b>	<b><u>Criteria (safe dates), comments</u></b>
<b>Piciformes (Woodpeckers)</b>		
Ivory-billed Woodpecker (SX, G1)	All	Anytime observed
Red-cockaded Woodpecker (SX, G3)	OZ, SE	Anytime observed
<b>Passeriformes (perching birds)</b>		
Least Flycatcher (SU, G5)	NE, NW	1,2 (5/27-7/7)
Loggerhead Shrike (S2, G5)	All (SW, KC, NW)	1,2 (4/20-7/20)
Common Raven (SX, G5)	All	Anytime observed
Brown-headed Nuthatch (SX, G5)	OZ, SE	Anytime observed
Brown Creeper (SU, G5)	SL, NE, OZ	1,2 (5/15-9/15)
Marsh Wren (S3, G5)	All (except SW, SE, OZ)	1,2 (5/25-8/25)
Bachman's Warbler (SX, GH)	All	Anytime observed
Chestnut-sided Warbler (S3, G5)	All	1,2 (6/1-8/10)
Black-throated Green Warbler (SU, G5)	SE	1
Cerulean Warbler (S2S3, G4)	All (OZ)	1,2 (6/1-8/10)
Swainson's Warbler (S2, G4)	SE, OZ, SW	1,2 (5/25-8/15)
Bachman's Sparrow (S1, G3)	OZ, SW, SE	1,2 (6/1-8/15)
Painted Bunting (S3, G5)	SW, OZ	1,2 (5/25-8/1)
Yellow-headed Blackbird (S3, G5)	NW (possible anywhere)	1
Pine Siskin (SU, G5)	All	1

**MDC Region abbreviations (Regions listed are those in which the species is most likely to be recorded).**

<b>CE- Central</b>	<b>KC- Kansas City</b>
<b>NE- Northeast</b>	<b>NW- Northwest</b>
<b>OZ- Ozark</b>	<b>SL- St. Louis</b>
<b>SE- Southeast</b>	<b>SW- Southwest</b>

## **Explanation of Criteria**

### **1. Confirmed breeding. Evidenced one or more of the following:**

- Nest building (except wrens and woodpeckers)
- Nest with egg(s) or young (seen or heard)
- Used nest or eggshells
- Physiological evidence of breeding based upon bird in hand (e.g. brood patch)
- Distraction display or injury feigning
- Recently fledged young
- Adults entering or leaving nest site in circumstances indicating nesting
- Adult carrying fecal sac
- Adult carrying food

### **2. Probable or possible breeding (valid only between safe dates)**

#### **Probable**

- Male and female seen together (not part of a flock)
- Bird holding territory
- Seven or more singing males detected in one visit
- Courtship or copulation
- Visiting probable nest site
- Agitated behavior or anxiety call (not provoked by observer)
- Nest building by wrens or woodpeckers

#### **Possible**

- Species heard or seen in breeding habitat

# PLANTS OF CONSERVATION CONCERN REPORTING FORM

## Complete relevant fields for which you have information

### HERITAGE BIOLOGIST AND LAB USE ONLY

EO Report Status (check one): New \_\_\_\_\_ Update with mapping \_\_\_\_\_ Update without mapping \_\_\_\_\_  
EO ID: \_\_\_\_\_ EONUM: \_\_\_\_\_ ELCODE: \_\_\_\_\_ Fed Status: \_\_\_\_\_ State Status: \_\_\_\_\_ SRANK: \_\_\_\_\_  
Heritage mapper: \_\_\_\_\_ Heritage map QC'er: \_\_\_\_\_ Heritage Biologist: \_\_\_\_\_  
Heritage mapping date: \_\_\_\_\_ Heritage map QC date: \_\_\_\_\_ Heritage Biologist Date: \_\_\_\_\_

### ELEMENT IDENTIFICATION and LOCATION

Scientific Name: \_\_\_\_\_ Common Name: \_\_\_\_\_  
Survey Site Name: \_\_\_\_\_  
Directions to the survey site: \_\_\_\_\_  
County(ies): \_\_\_\_\_  
USGS Quadrangle name(s): \_\_\_\_\_  
Township: \_\_\_\_\_ Range: \_\_\_\_\_ Section: \_\_\_\_\_ Quarter Sections: \_\_\_\_\_  
GPS should be in NAD83, zone 15. If not, indicate: NAD \_\_\_\_\_ Zone \_\_\_\_\_  
UTM: Easting (X) \_\_\_\_\_ OR: Latitude (N) \_\_\_\_\_  
Northing (Y) \_\_\_\_\_ Longitude (W) \_\_\_\_\_  
Explanation of possible GPS unit inaccuracy: \_\_\_\_\_

### MAPPING

Attach a map with the species' location clearly marked in hard copy, digital, or shapefile format. No county maps, please.  
Person who marked the map (last name, first name): \_\_\_\_\_  
Locational Uncertainty (buffer radius): The mapped location is within \_\_\_\_\_ Meters OR \_\_\_\_\_ Feet OR \_\_\_\_\_ Miles

### ELEMENT OCCURRENCE SURVEY INFORMATION

Survey Date (yyyy-mm-dd): \_\_\_\_\_ Observer(s) (last name, first name): \_\_\_\_\_  
Abundance (actual and/or estimated number observed): \_\_\_\_\_  
Condition (plants sterile, in bud, flower or fruit, evidence of disease, predation, or exotics): \_\_\_\_\_  
Person hours searching for Element: \_\_\_\_\_  
Specimen or photograph taken (collector/photographer, collection #, year, acquisition number and repository): \_\_\_\_\_  
General Habitat Description: \_\_\_\_\_

### CONSERVATION INFORMATION

Managed Area Name(s): \_\_\_\_\_  
Is EO completely within boundaries of Managed Area(s)? Yes OR Partially  
Owner(s): \_\_\_\_\_  
Owner Comments (include address/phone number and other relevant comments): \_\_\_\_\_  
Management Comments (needs for management, protection, monitoring, and/or research): \_\_\_\_\_

General Comments (include any associated species and/or any other relevant information): \_\_\_\_\_

Form completed by (last name, first name): \_\_\_\_\_ Date: \_\_\_\_\_

Thank you for your assistance in helping maintain the Missouri Natural Heritage Program.  
Return to: Resource Science Division – Heritage Botanist, Missouri Department of Conservation,  
P.O. Box 180, Jefferson City, Missouri 65102. (573) 522-4115

### HERITAGE BIOLOGIST USE ONLY

EO Rank: \_\_\_\_\_ Origin Subrank: \_\_\_\_\_ EO Rank Comments: \_\_\_\_\_  
Reference(s) (include contact information for any new references): \_\_\_\_\_  
Version Author (last name, first name): \_\_\_\_\_

# ANIMALS OF CONSERVATION CONCERN REPORTING FORM

Complete relevant fields for which you have information

## HERITAGE BIOLOGIST AND LAB USE ONLY

EO Report Status (check one): New \_\_\_\_\_ Update with mapping \_\_\_\_\_ Update without mapping \_\_\_\_\_  
EO ID: \_\_\_\_\_ EONUM: \_\_\_\_\_ ELCODE: \_\_\_\_\_ Fed Status: \_\_\_\_\_ State Status: \_\_\_\_\_ SRANK: \_\_\_\_\_  
Heritage mapper: \_\_\_\_\_ Heritage map QC'er: \_\_\_\_\_ Heritage Biologist: \_\_\_\_\_  
Heritage mapping date: \_\_\_\_\_ Heritage map QC date: \_\_\_\_\_ Heritage Biologist Date: \_\_\_\_\_

## ELEMENT IDENTIFICATION and LOCATION

Scientific Name: \_\_\_\_\_ Common Name: \_\_\_\_\_  
Survey Site Name: \_\_\_\_\_  
Directions to the survey site: \_\_\_\_\_  
County(ies): \_\_\_\_\_  
USGS Quadrangle name(s): \_\_\_\_\_  
Township: \_\_\_\_\_ Range: \_\_\_\_\_ Section: \_\_\_\_\_ Quarter Sections: \_\_\_\_\_  
GPS should be in NAD83, zone 15. If not, indicate: NAD \_\_\_\_\_ Zone \_\_\_\_\_  
UTM: Easting (X) \_\_\_\_\_ OR: Latitude (N) \_\_\_\_\_  
Northing (Y) \_\_\_\_\_ Longitude (W) \_\_\_\_\_  
Explanation of possible GPS unit inaccuracy: \_\_\_\_\_

## MAPPING

Attach a map with the species' location clearly marked in hard copy, digital, or shapefile format. No county maps, please.  
Person who marked the map (last name, first name): \_\_\_\_\_  
Locational Uncertainty (buffer radius): The mapped location is within \_\_\_\_\_ Meters OR \_\_\_\_\_ Feet OR \_\_\_\_\_ Miles

## ELEMENT OCCURRENCE SURVEY INFORMATION

Survey Date (yyyy-mm-dd): \_\_\_\_\_ Observer(s) (last name, first name): \_\_\_\_\_  
Abundance (actual and/or estimated number observed): \_\_\_\_\_  
Condition (evidence of reproduction, disease, predation, injury, etc. For cave species, indicate hibernaculum, maternity, etc.): \_\_\_\_\_  
External Measurements: \_\_\_\_\_  
Person hours searching for Element: \_\_\_\_\_  
Sampling Methodology (traps, seining, call count, etc.): \_\_\_\_\_  
Specimen or photograph taken (collector/photographer, collection #, year, acquisition number and repository): \_\_\_\_\_  
General Habitat Description: \_\_\_\_\_

## CONSERVATION INFORMATION

Managed Area Name(s): \_\_\_\_\_  
Is EO completely within boundaries of Managed Area(s)? Yes OR Partially  
Owner(s): \_\_\_\_\_  
Owner Comments (include address/phone number and other relevant comments): \_\_\_\_\_  
Management Comments (needs for management, protection, monitoring, and/or research): \_\_\_\_\_

General Comments (include any associated species and/or any other relevant information): \_\_\_\_\_

Form completed by (last name, first name): \_\_\_\_\_ Date: \_\_\_\_\_

Thank you for your assistance in helping maintain the Missouri Natural Heritage Program.  
Return to: Resource Science Division – Heritage Zoologist, Missouri Department of Conservation,  
3500 East Gans Road, Columbia, Missouri 65201. (573) 815-7900

## HERITAGE BIOLOGIST USE ONLY

EO Rank: \_\_\_\_\_ Origin Subrank: \_\_\_\_\_ EO Rank Comments: \_\_\_\_\_  
Reference(s) (include contact information for any new references): \_\_\_\_\_  
Version Author (last name, first name): \_\_\_\_\_

# TERRESTRIAL NATURAL COMMUNITY REPORTING FORM

Complete relevant fields for which you have information

## HERITAGE BIOLOGIST AND LAB USE ONLY

EO Report Status (check one): New \_\_\_\_\_ Update with mapping \_\_\_\_\_ Update without mapping \_\_\_\_\_  
EO ID: \_\_\_\_\_ EONUM: \_\_\_\_\_ ELCODE: \_\_\_\_\_ GELCODE: \_\_\_\_\_ Gelcode Conf. Level: 1 2 3  
Heritage mapper: \_\_\_\_\_ Heritage map QC'er: \_\_\_\_\_ Heritage Biologist: \_\_\_\_\_  
Heritage mapping date: \_\_\_\_\_ Heritage map QC date: \_\_\_\_\_ Heritage Biologist Date: \_\_\_\_\_

## ELEMENT IDENTIFICATION and LOCATION

Terrestrial Natural Community Name/Type: \_\_\_\_\_  
Survey Site Name: \_\_\_\_\_  
Directions to the survey site: \_\_\_\_\_  
County(ies): \_\_\_\_\_  
USGS Quadrangle name(s): \_\_\_\_\_  
Township: \_\_\_\_\_ Range: \_\_\_\_\_ Section: \_\_\_\_\_ Quarter Sections: \_\_\_\_\_  
GPS should be in NAD83, zone 15. If not, indicate: NAD \_\_\_\_\_ Zone \_\_\_\_\_  
UTM: Easting (X) \_\_\_\_\_ OR: Latitude (N) \_\_\_\_\_  
Northing (Y) \_\_\_\_\_ Longitude (W) \_\_\_\_\_  
Explanation of possible GPS unit inaccuracy: \_\_\_\_\_

## MAPPING

Attach a map with the natural comm. location clearly marked in hard copy, digital, or shapefile format. No county maps, please.  
Person who marked the map (last name, first name): \_\_\_\_\_  
Locational Uncertainty (buffer radius): The mapped location is within \_\_\_\_\_ Meters OR \_\_\_\_\_ Feet OR \_\_\_\_\_ Miles

## ELEMENT OCCURRENCE SURVEY INFORMATION

Survey Date (yyyy-mm-dd): \_\_\_\_\_ Observer(s) (last name, first name): \_\_\_\_\_  
Plant species composition (5-10 dominant or characteristic plant taxa by scientific name): \_\_\_\_\_  
General Habitat Description (describe substrate, topography and vegetation structure including acreage. E.g., "Glade system with three openings of 1, 5, and 10 acres." If part of a natural community complex, describe what percentage of the mapped polygon is made up of this EO type. E.g., "30% of a complex with wet-prairie and freshwater marsh."): \_\_\_\_\_  
Community Significance (circle one): Significant Exceptional Notable  
EO Rank: \_\_\_\_\_ Origin Subrank: \_\_\_\_\_ EO Rank Comments (describe ecological integrity; i.e., resemblance to presettlement condition, lack of exotic species, presence of conservative species, floristic quality index values, etc.): \_\_\_\_\_

## CONSERVATION INFORMATION

Managed Area Name(s): \_\_\_\_\_  
Is EO completely within boundaries of Managed Area(s)? Yes OR Partially  
Owner(s): \_\_\_\_\_  
Owner Comments (include address/phone number and other relevant comments): \_\_\_\_\_  
Management Comments (needs for management, protection, monitoring, and/or research): \_\_\_\_\_

General Comments (include any associated species and/or any other relevant information): \_\_\_\_\_

Form completed by (last name, first name): \_\_\_\_\_ Date: \_\_\_\_\_

Thank you for your assistance in helping maintain the Missouri Natural Heritage Program.

Return to: Wildlife Division – Heritage Ecologist, Missouri Department of Conservation,  
P.O. Box 180, Jefferson City, Missouri 65102. (573) 522-4115

## HERITAGE BIOLOGIST USE ONLY

Reference(s) (include contact information for any new references): \_\_\_\_\_  
Version Author (last name, first name): \_\_\_\_\_

# AQUATIC NATURAL COMMUNITY REPORTING FORM

Complete relevant fields for which you have information

## HERITAGE BIOLOGIST AND LAB USE ONLY

EO Report Status (check one): New \_\_\_\_\_ Update with mapping \_\_\_\_\_ Update without mapping \_\_\_\_\_  
EO ID: \_\_\_\_\_ EONUM: \_\_\_\_\_ ELCODE: \_\_\_\_\_  
Heritage mapper: \_\_\_\_\_ Heritage map QC'er: \_\_\_\_\_ Heritage Biologist: \_\_\_\_\_  
Heritage mapping date: \_\_\_\_\_ Heritage map QC date: \_\_\_\_\_ Heritage Biologist Date: \_\_\_\_\_

## ELEMENT IDENTIFICATION and LOCATION

Aquatic Natural Community Name/Type: \_\_\_\_\_  
Survey Site Name: \_\_\_\_\_  
Directions to the survey site: \_\_\_\_\_  
County(ies): \_\_\_\_\_  
USGS Quadrangle name(s): \_\_\_\_\_  
Township: \_\_\_\_\_ Range: \_\_\_\_\_ Section: \_\_\_\_\_ Quarter Sections: \_\_\_\_\_  
GPS should be in NAD83, zone 15. If not, indicate: NAD \_\_\_\_\_ Zone \_\_\_\_\_  
UTM: Easting (X) \_\_\_\_\_ OR: Latitude (N) \_\_\_\_\_  
Northing (Y) \_\_\_\_\_ Longitude (W) \_\_\_\_\_  
Explanation of possible GPS unit inaccuracy: \_\_\_\_\_

## MAPPING

Attach a map with the natural comm. location clearly marked in hard copy, digital, or shapefile format. No county maps, please.  
Person who marked the map (last name, first name): \_\_\_\_\_

## ELEMENT OCCURRENCE SURVEY INFORMATION

Survey Date (yyyy-mm-dd): \_\_\_\_\_ Observer(s) (last name, first name): \_\_\_\_\_  
Aquatic assemblage (5-10 dominant or characteristic fish and/or aquatic invertebrate taxa by scientific name): \_\_\_\_\_  
General Habitat Description (describe stream order, miles to headwaters, riparian corridor condition, composition of riffles and pools, and other physical factors): \_\_\_\_\_  
Community Significance (circle one): Significant Exceptional Notable  
EO Rank: \_\_\_\_\_ Origin Subrank: \_\_\_\_\_ EO Rank Comments (describe ecological integrity; i.e., resemblance to presettlement condition, lack of exotic species, presence of conservative species, biologic integrity index values, etc.): \_\_\_\_\_

## CONSERVATION INFORMATION

Managed Area Name(s): \_\_\_\_\_  
Is EO completely within boundaries of Managed Area(s)?: Yes OR Partially  
Owner(s): \_\_\_\_\_  
Owner Comments (include address/phone number and other relevant comments): \_\_\_\_\_  
Management Comments (needs for management, protection, monitoring, and/or research; include RAM monitoring site number): \_\_\_\_\_

General Comments (include any associated species and/or any other relevant information): \_\_\_\_\_

Form completed by (last name, first name): \_\_\_\_\_ Date: \_\_\_\_\_

Thank you for your assistance in helping maintain the Missouri Natural Heritage Program.  
Return to: Resource Science Division – Heritage Coordinator, Missouri Department of Conservation,  
P.O. Box 180, Jefferson City, Missouri 65102. (573) 522-4115

## HERITAGE BIOLOGIST USE ONLY

Reference(s) (include contact information for any new references): \_\_\_\_\_  
Version Author (last name, first name): \_\_\_\_\_